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VOLUME 31

IN THE SUPERIOR COURT,

State of California, County of Sacramento.

OCTOBER SESSION, 1881.

HON. JACKSON TEMPLE, - - - - - - - PRESIDING JUDGE.

WINFIELD J. DAVIS, OFFICIAL REPORTER.

SAMUEL OSBOURNE AND WILLIAM M. CUTTER, REPORTERS.

The People of the State of California,
vs.
The Gold Run Ditch and Mining Co.

COUNSEL:

For Plaintiff,

HON. A. L. HART, Attorney General, GEORGE CADWALADER, ISAAC S. BELCHER, A. L. RHODES, RICHARD BAYNE.

For Defendant,

J. K. BYRNE, W. C. BELCHER, S. M. WILSON, W. T. WALLACE, A. B. DIBBLE, A. P. CATLIN.

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In the Superior Court of the State of California in and for the County of Sacramento

The People of the State of California
vs.
The Gold Run Ditch and Mining Company

Afternoon Session Thursday Jany 5th/82

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Arnfield J Davis
Official Reporter

In the Superior Court of the State of California in and for the County of Sacramento.

The People of the State of California vs. The Gold Run Ditch and Mining Company } Afternoon Session Thursday Jany 5th/82

Testimony of G. G. Blanchard direct-resumed

Mr. Dibble You stated in your reply to a question I asked you, that the value of the made land in comparison with the natural adjacent land was as one to ten. Which way? A. The made land is ten times the value
8745 of the natural land

2. State the value and cost of the mining properties in El Dorado County, and in that connection I will ask you to include the ditches, for they are just as much a portion of mining property as any other thing?

A. The Old South Fork Canal was built at an expense of about $800.000. The California Water Company about $700.000. The El Dorado and Deep Gravel Mining Company has expended about $1.000.000 and a little rising perhaps. The Old Bradley Berdan & Co Ditch cost about $500000. Jones Forman & Co about $400.000 The Indian diggings, or what they call the Cedarville Ditch, about $75.000 perhaps more than that. What are called the Coloma ditches 3 or 4 in number — ditches that run past and into Coloma — probably cost $100.000. — The Natoma Canal is partly

8746

in Sacramento and partly in El Dorado Counties. Their dam is about 3 miles above Salmon Falls in El Dorado County. It would be safe to say that the Natoma Canal cost $250.000. perhaps $300.000 Aside from these Canals which I have named there are innumerable small canals. For instance the Weaver Creek ditch runs very high up on Weaver Creek into Coon Hollow a distance of 10 or 12 miles That ditch probably cost $25.000. The Parker Ditch which runs parallel with it probably cost $15.000. Then the Gold Hill Ditch running from Placerville to Gold Hill and vicinity; I would say the main ditch and its tributaries and the appendages of the ditch probably cost $50000 or $75.000 all told, lateral ditches and all. Then there is the Johnson Finch Cañon and What is called the Iowa

8747

Ditch, the Laveroni, The Snow, The Steadman, and The Mansfield Ditch?

Q Average the cost of the last named ditches you have mentioned? A. All of them together perhaps were constructed at a cost of from $50.000 to $75.000.

Q What others?

A The other ditches are smaller ditches. There is not a ravine or a canon in El Dorado County that has not a ditch and some have 3 or 4 of them

Q. How about the Park Canal?

A The Park Canal now comprises the Bradley Canal and the Old Farman Ditch. It is consolidated and now called the Park Canal

Q. State as to the extent and capacity of the reservoirs, the mining reservoirs?

A I saw an estimate —

Mr Hart. (Intg) Do you say you saw an estimate?

8748

A. Yes.
Mr. Hart. I object to his stating what he saw
Mr. Dibble State what you know about that?
A The main reservoir is what is called Silver Lake It has an area now of about 6 miles long and probably 3 miles wide. This is a natural lake with a dam built across the mouth of Alpine Creek
Mr. Hart. What is the name of that lake?
A Silver Lake. It is a resort in summer time, has been for a number of years. The dam I believe is about 25 feet high. Then there is an impounding place for water called Echo Lake comprising two lakes. They are about 3/4 of a mile wide and 3 miles long. Echo Lake has a depth from its shores of from nothing to 100 feet. Silver Lake has

8749

a depth of 100 feet perhaps, 75 or 100 feet. I have been over both lakes repeatedly and knew them all before they were constructed into impounding places for water. They have a large reservoir at Blakely's Ranch. That is their main reservoir; that they built up. That I think takes in about 14 acres of land and the water in it is 25 feet deep. And they have the Corn Hill reservoir. Their main reservoir at Texas Hill I think they have abandoned. They have several small reservoirs. I should judge the impounding capacity would be over 1.000.000.000 of cubic yards

Mr Hart. All of them?

A Yes. The estimate that I saw was 1.700.000.000

Mr. Dibble Do you mean 1.000.000.000 cubic yards? Do you mean inches or yards in that measurement of water?

Pg 50

Mr. Belcher 1.000.000.000 cubic yards as it stands in the reservoirs, I understood him to say.

Witness. Yes. As it stands; the capacity of the water. That was the Estimate made by Professor Price

Mr Dibble Do you know a ditch called the Georgetown Ditch

A. Oh yes. This is exclusive of the Georgetown ditches; this impounding capacity that I spoke of is of the El Dorado ~~Gravel~~ water and Deep Gravel Mining Company. The Georgetown ditches have a lake called Loon Lake. It is a mile or two across it, and then they have a great many reservoirs. The Park Canal Company have a great many reservoirs; ~~the tailings coming down and filling~~ All these ditches that I have named have reservoirs.

Q For what purpose were these ditches and

8707

reservoir constructed?

A For the purpose of mining.

Mr Hart. Including the lakes do you mean?

Mr. Dibble What was the expense of the Georgetown reservoir and ditches, about?

A Well, I should say about $700.000 or $750.000. at least. Their late improvement have cost about $400000.

Q. When did the construction of these ditches and reservoirs commence what year?

A In 1851.

Q What is the total length as near as you can ascertain of these mining ditches, the construction of which began in 1851? A. The Park Canal has about 500 miles, its main ditches and its lateral ditches. The El Dorado Water and Deep Gravel Mining Company, including the Old South Fork which now belongs to that Company, the Coco Hill and the Weaver

8752

Ditch, and the laterals, supply ditches, about 225 miles. The smaller ditches, put them alltogether, have as much more I have not named the Eagle ditch or the Jackson ditch. The Eagle ditch supplies Grizzly Flat and that immediate country; the Jackson ditch supplies Henry's diggings — the old Jackson ditch. I should say the remaining ditches in length would be as much more

8753

Mr Belcher As much more as what? A- Than the Park Canal and the El Dorado and Deep Gravel Mining Company put together, More than as much more. I will say probably a thousand miles.

Mr. Dibble. A thousand miles of ditches? A- Yes. Put the balance of them together.

Q- What is the effect of these reservoirs with reference to overflows of the valley land in the Winter and with the reference of furnishing water in the Summer?

A- The mining reservoirs were constructed for the purpose of impounding the waters that otherwise would flow off in the Spring when the snow melts, in Spring floods, which were let onto those ditches during the Summer months, the irrigating months, from about the middle of July onto the

8704 close of the season. It has a

tendency as a matter of course to raise the water of these streams during the Summer. The Echo Lake waters flow into the State of Nevada. Those waters now flow into the American River. That is a clear gain to the rivers: the Sacramento River and the American River. That water in winter time flows down Osgood Creek or what is called Echo Lake outlet in the Spring time probably twenty five thousand inches. I am speaking of my own estimate and also speaking of estimates made by experts. There was long litigation in relation to the rights of this El Dorado Water and Deep Mining Company to divert the waters of Echo Lake into the American River. It was claimed that it was Nevada water and flowed into the State of Nevada. But it was determined that they had a

8755

right to divert it and run it on this side or flow it into the American River. The twenty five thousand inches is the flow during the melting of the snow in early Spring. In the Summer time it dries down to a very small stream, comparatively nothing.

Q- Do you mean to say that the storage reservoirs furnish for navigation in the Summer twenty five thousand inches per day.? A- No.

Mr. Hart We object to the question as leading. You can ask him what he means

Mr. Hibble State what you mean?

A- I say that it impounds the water from the shed shedding into Echo Lake. Echo Lake or the two little lakes I believe are about three miles long, connected by a small neck. The snows are very deep there; twenty five feet

8756

deep; from ten to twenty five feet deep. It is right on the Summit; these lakes are right on the summit or a little over on the Lake Valley side of the Summit

Q- To what extent do these mining reservoirs add to the navigability of the Rivers in the summer season after the rainy season?

A- It increases the volume, the natural volume, of the water of these Rivers to the extent of the impounding of the waters, and the impounding is just as I have stated.

Q- To a large or small extent?

A- Quite a large extent.

Mr. Hart The witness has stated what it was and the Court can determine from that.

The Witness But for these reservoirs the water of course would run down here in

8757

the Winter time.

Mr. Dibble To that extent would run down here in the winter time and be lost?

A- Yes

Q- When did river mining on the forks of the American river practically cease?

Mr. Hart What do you mean by practically

Mr. Dibble Generally, largely.

A- To a certain extent it ceased on account of the difficulty in getting into the river. All of the miners were flowing their tailings of course into the streams and running into the river, and they were drowned out. In floods, for instance, the water that would come down, the tailings and debris, would fill up their pit holes.

Q- Practically it ceased then as I understand you, by reason of mining debris coming from above down

8758

below on them.
A- Yes largely on that account; the tailings coming down and filling up their pitholes and driving them out of the river.
Q- You have stated the cost and value of the ditch property and the reservoir property of the miners in your county and in your section. What is the value of the other mining properties outside of the ditches and reservoirs?
A- I have not stated the cost of the mining property.
Q- No; that is what I am getting at now?
A- There has been, there are today over two hundred stamps running, & a great many quartz mills. There has been a great deal of money expended in mining machinery in that direction. And there has been a great deal of money expended in the running of bed-rock races

and tunnels for the purpose
of developing the old river
channels that run through
that county. A very large a-
mount of money has been
expended in the developing of
these mines and in machinery
for working quartz and gravel
Q- In round figures approx-
imate the amount?
A- I should say from all
these sources there had been
over five hundred thousand
dollars, considerably over
five thousand dollars.
Mr. Hart Over how much.
A- Over five hundred
thousand dollars. Probably
twice that much
Mr. Dibble What has been
the amount of the gold
production in El Dorado
County from mining, in
round figures?
A- From 40 to 50 millions
perhaps more.
Q- How much remains
8760 to be taken out?

Mr Hart We object unless he shows he knows.

Mr. Dibble Why he has mined all around there.

In your judgment as a miner, from your knowledge of the mines that have been worked there what is the amount that remains to be taken out?

Mr. Hart We object on the ground that the witness is not shown to be competent

The Witness I do not believe one fourth of it has been taken out.

Mr. Hart We move to strike that out as an answer made while an objection is pending.

The Court Let it be stricken out.

Mr. Hart We now object to the witness testifying on the subject on the ground the he has not been shown to be competent.

Mr. Dibble — If the Court desires
8761 I will go into that to the fullest extent the Counsel may require.

Mr Dibble Q What is the amount sir?

Mr Hart I object to that unless he shows himself competent to answer.

Mr Dibble Q How long have you been interested in mining in El Dorado County and in the State of California?

Mr Hart I object to that on the ground that he has already testified to that fully

The Court I do not think he has shown that he knows anything about it yet

Mr Dibble Q Do you know the character of the mining lands that remain gravel channels that remain in El Dorado County?

A I do. Every one.

Q Are you acquainted with the results of the past minings ~~actual~~ from

8762 these gravel channels?

A Mostly

Q From the past production, can you, by reason of your knowledge of the gravel and its contents — can you determine the value approximately of that which remains? A I can simply say this: I have been interested in mining in the South fork of the American river both in the bed and in the banks of the river. I have mined there. I have been engaged in mining at what is called Boston Tunnel, the old Boston tunnel in the middle Fork down near Volcanoville. I owned some placer mines just above Volcanoville and I had them worked and I built a quartz mill. I built a forty stamp quartz mill in 1852 on Mathenes Creek

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and I also owned a quartz mill at Log Town and another at Placerville and I am at this time interested in a fifty stamp quartz mill which is now running and has been running for about a year. I have visited every hydraulic or placer section there is in El Dorado County and most all of them in Placer County; in Amador County and in Calaveras as far down as Murphy's and I have given particular attention to that sort of industry having been to a certain extent interested in it and I know the channels, those that have been discovered. I can name them - what is denominated in El Dorado County as Old river channels. I can name the shafts and where they are and

8764

the approximate depth of the pay as a rule. Of course a great deal of it I gathered from conversation with the proprietors of the mines.

Q Well on such a judgment as you have been enabled to form by so long an experience and knowledge of the mines what remains in the mines to be taken out?

Mr Hart I object to that question as incompetent. You can prove exactly what has been taken out and what it has paid per foot, per yard or per acre and then the Court can draw its own inference as to the amount.

Q Base your estimate on your knowledge of what it has paid?

A The Lyon Mine and
8765 the Cumfa Mine and

the Cedar Still and Texas Still and the Benfeldt mine are all on the old, what is termed the old, blue lead or the old, ancient river. That has been traced, I think as far as North San Juan as far as I know it. I have been at North San Juan and I have seen evidences of it. The Lyon mines pays from $3 to $30 a ~~ton~~ car load and the cars contain about 1000 pounds of gravel. I had it weighed for another purpose and that I now recall to mind. The Benfeldt mine — that is a mill that I neglected in my estimate of the number of stamps on gravel. Mr Benfeldt is running his mill and I had forgotten it. That is at Smith's Flat. That

8766 channel has been opened

from the crossing of the road at Smith's Flat — the old Nevada Road down through as far as Weber Creek a distance of about 4 miles, perhaps 5 miles — it may not be so much. The first bench of this old lead It was in a flat below the surface of Stang Town Still or Texas Still rather, about 150 feet or 200 feet Then they went down 120 feet through lava and there they struck a bed of blue gravel. That they run North and South and supposed that that was the only gravel bench. That was owned by St. L. Robinson. I was familiar with it and I have been in their drifts time and again and I have been at their mill and have seen them clean up

8767

I have seen their bullion and I have been rather a privileged character I suppose about their claim, at least I have taken visitors there and have generally had my own way about the premises. They rose up then 30 feet and went to the East. This lower channel was about 60 or 70 feet wide perhaps a little rising of that They raised up about 30 feet in their old shaft which was 120 feet deep and went to the East and there they found a channel richer but of a reddish colored gravel and the channel was about 100 feet wide They worked on that and run North and South and they raised up again about 30 feet and went right on to

8708

the East again and they reached another channel; in places it was 130 feet wide. They have now gone on top of the flat and run a drift through and have gone still further East and have struck a channel from 110 to 160 feet wide and they are working that They have been working it for about 10 years. And Mr Benfeldt is on the same lead. The Lindenfrank Mining Company is on the same lead. The Cedar Still — Cedar Spring they call it now or the old Dickerhoff Mine is on the same lead and they are still working it and the pay is about, as I have stated, from $3 to $30 a carload Their cars are of the ordinary size of miners' cars. They hold 1000

8769

pounds of gravel as a fact.

Q State upon your explanation and knowledge the aggregate result as to the amount of gold remaining to be worked in El Dorado County?

A I do not think one fourth of the gold has been taken out

Q What would it amount to? A I do not know

Mr Belcher. He has said that from 30,000,000 to 50,000,000 already produced.

Mr Dibble Q How many claims, mining claims in round numbers are there in El Dorado County. How many hundred?

A Five hundred or six hundred may be more. You mean quartz and gravel and all kinds of mining claims — mining locations? If so I

8770 say yes.

Q- When did possessory rights to those claims with reference to the early years commence
A- So far as I know—
Mr. Hart (Duty) I object to their proving title in this way. It is irrelevant and immaterial
The Court I do not see any point to it. I suppose we will take it for granted that they had possessory rights.
Mr. Dibble I want to prove that they had away back in 1849 possessory rights to these mining claims. If the purpose is to show their possession then commenced and that it has been continued to the present time— thirty one years. That is the object of it I do not think there should be any objection to it.
The Court I do not see any particular point to it.
Mr. Hart I will withdraw my objection for one answer.
8771 Mr Dibble Answer the

question when the possessory rights commenced?
A- So far as I know -
Mr Hunt (Inty) I will insist on the objection but I will allow them to ask the question without objection as to when these parties went into possession of these mining claims but the matter of possessory rights is a legal question
The Court When did they first take possession of the claims?
A- What parties do you refer to?
Mr. Dibble Mining claims?
A- The possessory rights commenced on the 6th of August 1850 to my knowledge - of mining claims there. To my knowledge the Miners had their possessory rights to mining claims in El Dorado County commenced on the 6th of August 1850 to my knowledge. They were already in there and at work. The bar had probably 250 men on it and they were all working

8772

and all tailing into the South Fork of the American River - everyone of them.
Q- What were the principal mining towns of El Dorado County in those early days and state the population of them?
Mr. Hart I object to that question it is immaterial and irrelevant. We have the gross population and I do not see any necessity of any detail I do not think it is material any way
Mr. Dibble The object of that testimony is to show the amount of mining done at that time and the amount of debris and sediment that came down below here. There was an immense population. I presume it is perfectly proper to show that there are hundred thousand or twenty thousand or whatever the figure was, because we claim that the early mining done the injury if any has been done.

8773

Q State the mining population giving the names to places

Mr Hart I object to that the population does not determine the amount of debris that was sent down in earlier days but the number of men actually employed in working mines determines it, The witness has stated the number to be I think 15000 he said

The Witness I said it was that at a certain time.

Mr Hart And he said that the amount of Cubic Yards each one put in to the stream, He stated it fully and said that after 1865 it has grown less so that the number of hands actually working in the River has been proven.

Mr Dibble Do mining towns and the population of mining towns make debris.

8774

A Yes. for instance starting
at the lower end of the
County Negro Hill, that
was a large and populous
town composed of miners
with there cabins and
a few stores and a black-
smith shops and a gambling
Saloon here and there
but the population was of
miners mainly and the
town was built by the
miners themselves and those
who were relying on them
for support - miners cabins
the town was full of them
probably nine tenths of the
buildings in the town
was occupied by miners
themselves - that is Negro
Hill. Massachusetts flat
that is between the North
and South Forks of the
American River. It runs
down to a point there.
The Junction is just below
Negro Hill. You come then
8775 up to Salmon Falls in

Eldorado County. There was a large prosperous mining town where there has been hundreds of acres mined off. There was several stores Blacksmith shops and of course Livery Stables and a few doctors a Justice of the Peace and other hangers on upon the mining industry. But the main bulk of the people were miners and they assembled there evenings. You go up from Salmon Falls on to Weber Creek and there was Vaughns store. It was called Vaughns Store and was quite a settlement

Mr Cadwalader Where was that?

A At Vaughns store on Weber Creek right below where you used to mine. Then you go up on Weber Creek the creek was scattered along with miners until you come to the

8776

town of Cold Springs, there was a town of three streets and the first public librairy ever in Eldorado County was at Cold Springs It was a very large town and a very lively town Now there is not but one house there. Then you come up to Hangtown as it was then called. There was a large town there and in and about Hangtown and its suburbs there was - I do not know but judging from what I saw there in early days in 1850 and the bustle in getting through the streets there must have been in that small area of territory there - there must have been 15000 people - taking in Coon Hollow and the adjacent reigon. Coon Hollow was a large town and had quite a long street and

8777

it was only a mile
and a half from Hangtown
Nobody is there and
it is all washed out.
There is the old Excelsior
mine at work there now
Then you come on up to
Weaverville there was a very
important mining Camp
and the Rival of Hangtown
There is only one man
living there now - Marchette
Then you go to Ringold
and there was a large
flourishing town and the
Country was full of miners.
Then you come up to
Newtown another large
town Iowaville that was
Quite a large Camp and
there was Mud Springs
that was a verry important
mining Camp. And Diamond
Springs and Aurum City
That Cast 192 votes at
an election. We Cast
them all but one in one
way. I recollect that I

8778

lived there myself.

Mr Hart Did you vote the other way

A No sir I voted with the crowd. and there was Frenchtown - a town called Frenchtown - a large town and Spanish Camp and Spanish Flat, now there is nobody there, Louisville and Greenville and Kelsey were towns that had streets in them and they supported professional men and each had a very promising and flourishing gambling House and some of them 8 or 10 Hangtown I think had probably 20 or more. and on the Rivers - Oregon bar on the North Fork when I was there in 1850 was quite a place. Rattle Snake was a very large and important place. Spanish Bar on the Middle Fork. Fords bar was not much of a ~~pp~~ place. There

8779

is a Fords bar on the North Fork and a Fords bar on the middle Fork. I was at each of them. Then there was Grey Eagle Wild Goose, and Wild Goose Flat was an important town. Pilot Hill had a street that was 300 yards long. There is no body there now. And Jones Hill and Bottle Hill and Spanish dry diggings and Volcanoville were there, there was a town on the Hill up from Grey Eagle. Grey Eagle was another town on the River. I have attended a good many miners meetings and I have been present at three mobs there and Judging from what I saw and the number of people that could be got together in a few minutes I formed something of a calculation of the number of people that was there. We had

8780

more population than they had in Sanfrancisco at one time. I suppose that is a matter of history. Coloma was a very important town and the county seat for a long time

2 At what time did the mining ditches and mining reservoir rights have their inception with reference to the earlier years?

Mr. Hart. That is a legal question

The Court. I think it has been substantially answered already

A. Mining ditches commenced in 1851

Mr Hart. I object to that

Mr Dibble. My purpose is to show that in 1850, and some of them at the very time he came to the State

The Court. When did they first commence to appropriate the water

Mr. Dibble With reference to the

ditches, and ditch rights of which you have spoken

A. When I first went to Nevada which was on the 19th of September 1850 there was a little ditch on Deer Creek running water around and into about eight long toms, that some gentleman had there that he was renting at $16 each a day. Then what is called the Rock Creek ditch spoken of by Judge Searls, was built I think by a man named Lane. There was another ditch then called Lane ditch also. In El Dorado County the ditches, ditch building, commenced in 1851 so far as I know, except some little short ditches, running water from the ravines in the heads of the toms or sluices. The Weber ditch, what is called the Weber ditch was commenced in 1851 and completed in the fall of 1851 and they were

8782

selling water at $1 an inch at Coon Hollow

2. Passing from Eldorado and coming down to Sacramento County, and state what Sacramento County had done in the way of filling up the river by mining the American river, by its own mining

A Yes, I know all there is of it. The Eldorado and Sacramento line runs across to the Cosumnes from near McDowell Hill and it takes in all of the diggings. It takes in Walls diggings, the Prairie City diggings

Mr. Hart. That is in Sacramento County?

A Yes, in Sacramento County. Prairie City was quite a large town and I think there was a town that they called Walls diggings, and some famous hotel I do not now recollect

its name, but there was quite a large amount of mining done there. The Bradley & Berdan Ditch extended down into Sacramento County and furnished the water and the Natoma Company furnished some of the water. There have been acres and acres I do not know but I might say hundreds that have been mined off — off of the surface in Sacramento County and they have been mining within the last six months. Evidences of it are seen coming along in the stage now, near the railroad about three miles from Folsom — four miles

8784

Q. What kind of diggings did the people here do in the river in Sacramento County, mining?

A. You have reference to the mining about Folsom the hills about Folsom, Prairie Diggings and Walls diggings

Q. Yes sir? A. It is surface mining, mining off the surface. About Folsom some of the banks there are 50 feet high, but when you get up to Prairie City and Walls diggings it is more shallow, the diggings are, where they are mining now or have been quite recently, up along the line of the stage road, the diggings probably would not be to exceed 2 1/2 feet deep or 3 feet, perhaps not that quite.

Q. Where is Mormon Island with reference to Sacramento City and American River?

A. It lays on the American River above Folsom and was one of the first mining

8785

camps in California, it was a very important town and a sort of head center for gold dust selling Adams & Co. having their express there

Q. State in what country it is? A. It is in Sacramento County and that country there around McDowell Hill and that section of the country down to Mormon Island and about Mormon Island is mined off — Extent of country.

Q And where did the miners in Sacramento County send their tailings which were mined away?

A Well, they all went into the American River into the tributaries of the American River, the heavy material a good deal of it remained upon the dumps.

Q In Sacramento County?

A Yes, in Sacramento County

Q. It went into the Sacramento River in Sacramento

8786

County? A Yes sir
Q. Do you recollect the place called Alder Creek?
A Yes sir
Q. Where is it — what is the character of the business done by the Sacramento County people there?
A It was a mining camp.
Q State the extent of it?
A It was a large mining camp, there has been a great deal of the surface washed off there.
Q Where did it go to?
A It went into the American River
Q. When you say a great deal from Mormon Island and a great deal from Alder Creek what do you mean by it?
A Well, I mean take the places around there ~~there~~ are thousands and hundreds of acres washed off
Q Hundreds and hundreds of acres? A Yes sir
Q That is indefinite —

8787

low many hundred.
A Do you mean adjacent to Mormon Island?
Q Alder Creek and Mormon Island? A. Well sir, I should say if you put it all in a body it would be 200 or 300 acres perhaps more
Q Do you know a place in Sacramento County on the American River called, Farmers Bar or Farmers Diggings?
A I have been there sir
Q. Where is that Farmers Bar or Farmers Diggings in Sacramento County with reference to Sacramento City?
A Well, it lies above Sacramento City on the river
Q About how far above?
A About 15 miles. Folsom is about 22 miles — it would be more than 15 miles,
Q And where did the material that was washed off of Farmers Diggings go to?
A It went into the American River. The sand and lighter

8788

material came down here.

Q. Do you know any other place where the people of Sacramento County, the miners of Sacramento County engaged in mining in Sacramento County besides those which you have referred to?

A There is a section of the country around Prairie City for 2 or 3 miles in extent that there has been more or less mining done upon. Considerable more — This Canal Co. extended their ditch down to there for the purpose of supplying the miners and they were worked to a large extent.

Q. Are you acquainted with a mining locality called Cosumnes Creek in Sacramento County?

A No sir.

Q How early did their mining in Sacramento County commence?

A It commenced to my knowledge in 1850. I was at Mormon Island and they

8789 were mining there, the main

business was mining, it was a mining town.

Q It commenced in 1850, Sacramento was a mining town at that time?

A No. Mormon Island. This town was a supply town for the miners

Q. State what you mean. Whether it commenced then you whether you found it then existing? A I found it then existing the diggings were being worked, and had been a good deal worked in 1850

Q. And they sent material right down here to Sacramento City? A Putting it into the river here

Q Putting it in?

A Yes sir

Q. Do you recollect of any places excepting those which you have mentioned, in the vicinity of Sacramento that were being worked as early as August 1850 when you

8790 came there?

A. No sir, I do not.
Q. What County is Negro Hill in and Texas Hill?
A. Negro Hill is in El Dorado County and Texas Hill is just above Placerville. There are two Negro Hills in El Dorado County. I suppose you refer to the one near the junction of the South and North Forks.
Q. What was the mining population of El Dorado County on the 9th of September 1850 at the time that California was admitted as a State into the Union?
A. I should say there was from 15000 to 20000 people there, perhaps more, it would probably exceed that.
Q. What was the population of the other Counties of the State at the time of its admission with reference to El Dorado County.
A. The main ~~po~~ population of the State at the time I came here, I say outside

8791

of the cities that are supplying miners now — there was quite a camp, quite a large place, trading and selling hay and mules and mining supplies to miners and fitting them out to go into the mines, and keeping boarding houses for miners and so on, but the main population so far as I know of it in the State leaving out San Francisco — San Francisco was a small town, I went to San Francisco first along about the last of August 1850 — the business of San Francisco was also connected with mines — the population of the State so far as I knew was in Amador, El Dorado, Placer, Nevada — Calaveras county had settled up considerably, the mining had commenced down there, but it was mainly in the mining counties, the body of the population

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Q In 1850 on the 9th day of September, what was the industry of the people of the State of California?

A Mining.

Q What other industry followed that industry after the admission of this State into the Union?

A Agriculture and horticulture and manufacturing.

Q I understood you to say that farming followed after the mining industry of this State? A Yes sir.

Q. At what time did the farming industry as an industry follow after the mining industry that gave life to the State?

Mr. Hart, I move to strike that part out

Mr. Dibble Well, strike out about the birth but it is true nevertheless?

A Well sir, the farming commenced mainly — there was at an early time some

8793

gardens. — I noticed going to Nevada crossing at Lisle's Bridge in 1850, in 1850, where Lisle Bridge was on the Norris grant, there was a little garden out to the left. If I am not mistaken they called it Smith's Gardens. There was no grain growing or anything like that. They were raising beef and stock but farming commenced I should say about 1853 or 54 or 55 or 56 — It was increasing along.

Cross-Examination
of
G. G. Blanchard.

Mr. Hart. When did farming commence in Santa Clara County

A Well, so far as my personal knowledge extends I could not tell you. I could only give you a history that a man by the name of

8794

Murphy gave me, who was one of the first settlers of Santa Clara.

Q. Didn't it commence in 1780? A. I do not think it did, what I call farming, they raised stock.

Q. Do you know whether agriculture as a business commenced in Santa Clara County in 1780, and whether it has been followed ever since? A. I suppose they raised some small fields of grain. The main business as I understand it was raising stock. As a matter of course they may have raised some small fields of grain. I believe Sutter had some small fields of wheat here in an early day but did not follow it as a business

Q Was not horticulture a very large interest in California, and in Santa Clara Valley, long before the

8795

white men, or American people ever settled in this State

Mr. Dibble I object to the question as to 1780 for I am perfectly satisfied that the witness was not here at that time

The Witness Of course all I know about this is what I have heard but I can give you my knowledge from what I have heard and I can give you the source of my information

Mr. Hunt. When was Sonoma County first settled as an agricultural County and devoted to agriculture and horticulture?

A Well, can you tell me where Younts place is, in Sonoma?

Q. That is in Napa County

A Nothing but from a matter of history. I can tell you what I know about

8796 that. I believe there was

a trading post there of the Hudson Bay Fur Company had one of their trading posts. I get that as a matter of history.

Q When was that, as a matter of history?

A Well, there were people there in 1830

Q Well, what did they pursue as an occupation? A Trapping

Q And nothing else?

A Oh, I presume they had apple fields of grain there

Q And stock raising?

A And stock raising, yes sir This mind you is presumption as a matter of course.

Q When was Los Angeles County first used as an agricultural stock raising and fruit raising County?

A Well, I could only tell you so far as the fruit raising goes, I presume it was a stock raising County, herds of cattle roamed there in an early day, Los Angeles

8797

and San Diego. I can give you the history of the State so far as we get it from our text books, that is all I can do about that.

Q How do you know then that agriculture followed mining in California?

A Simply because the people that came to California, outside of the Murphy's and Sutter and Major Snyder, and Bidwell and Marshall and the captains of the trappers and the trappers themselves in the employ of the Hudson Bay Company and the Padres who were on religious mission and all that sort of thing, outside of that I can tell you when the agriculture started here

Q. When did agriculture commence in Monterey County as a business? A That I could only tell you and answer you in the way that I am speaking of and my information from that

8798

source is very reliable and I can give it to you

Q. It is mere information, you do not know?

A No sir

Q. When did it commence in Santa Cruz County?

A I only know from the same sources that I tell you now

Q. Now I will ask you again how do you know that agriculture was not extensively carried on in different portions of California before mining?

A Because the people that came to California, came here for the purpose of mining or for the purpose of carrying on business connected with mining. Those who came from 1848 after the 29th of September they came for that purpose, and those that deserted from the ships that lay in the harbor of San Francisco went to the mines for the purpose of mining. The State so far as I

8799 understand, was not an

agricultural State at all, it was little known and the body of people that came there in 1848, 1849, 1850, 1851, 1852, 1853 and a large majority that came in 1854 came expressly to mine or to embark in business that drew its support from miners or mines

Q How do you know the purpose with which people came to California?

A I came there in 1850 and I came into Placerville at that time and the people were all miners. I went over to Nevada County and travelled through Placer and I did not meet anybody who was not a miner or a man that came for the purpose of making money off of the mines or off of miners.

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Q- That is not an answer sir? I asked you know the purpose with which people came to California?
A- From the pursuits that they followed after they got here, and from what I heard them say and from what I know of the business of the people.
Q- Then if I understand you rightly you knew that mining preceded agriculture because the people came here for the purpose of mining, and you know that they came here for the purpose of mining because they pursued that occupation after they got here?
A- Yes
Q- Is that intelligent reason why you know that agriculture did not precede mining in this state as an industry?
A- Yes sir I think it is.
Q- You think it is an intelligent reason?
A- A very intelligent reason. I have yet to meet with the man in this state who

came here in 1848 '49, '50, '51 and '52 that did not say he came here for the purpose of mining or transacting some business connected with mining

Q- In which you include merchandise?

A- Yes, including merchandizing and I include the profession, the great business like in the Sacramento in 1850.

Q- In making your statement as to the occupation of the people do you include the natives that lived here-

A (Intg) The Spaniards

Q- My question is Mexicans and native Californians who were here when our people came here?

A- Yes sir I include them

Q- They were all engaged in mining in A- In El Dorado County we had a town called Spanish Flat, Spanish Town and Spanish dry diggings and Spanish Camp, we have three different camps and

8602

every one of them were miners -
the traders were Americans
Q - Is it not true that nine
tenths or at least one half
of the Spanish population were residing
in the grants in this State
and devoting themselves to
stockraising as a business?
A - Yes sir. I understand
that when gold was discovered
there they left their ranches
Mr. Murphy himself took his
Indians some nine or thirteen
in number and went to
Hangtown and mined in
ravines and he brought
up his silver for the purpose
of buying golddust and
brought his Indians from
Santa Clara in the Fall of
1848.
Q - He had previously been
in the stock business?
A - He had previously been
in the stock business, but
everything else was abandoned
The people of this State
8803 principally abandoned the

occupations that they were engaged in and went to mining.

Q- What do you include in agriculture?

A- Well what I mean by agriculture and I suppose Judge Dibble gave it that meaning, was general farming, fencing in land and plowing and sowing, planting and harvesting and all that sort of thing and carrying it on as a business.

Q- But you do know that large portions of this State and indeed all the agricultural lands of the Sacramento Valley had been devoted to stock raising before there was any mining in this State?

A- I was trying to think the year that I passed down through where Woodland now is down to Yount's and down into

8804 Sonoma and Major Snyder's

- I was trying to think of that year and I did not see any farms
Q- You saw stock raising and stock ranches?
A- Yes Sir.
Q- And nearly all of this valley had been devoted to that purpose before any mining was done?
A- Yes Sir.
Q- You know that as a matter of history?
A- Yes Sir I suppose so.
Q- Large Spanish grants existed all over this country did it not? A- Yes Sir.
Q- And took up a great portion of the agricultural lands? A- I so understood it.
Q- Those grants have been used according to your knowledge which is the same as the knowledge upon which you base your first statement, that is your reading and history, stock raising had been followed and those
8815 lands had been used

for those purposes for nearly one hundred years before there was any mining in this State?

A- I so understand it.

Mr. Belcher The lands in Sacramento Valley?

A- One hundred years in the Sacramento Valley.

Mr. Hart Yes sir?

A- No sir.

Q- How long according to your reading before there was any mining?

A- Well really my recollection don't run further back than 1842 or '3 — my reading.

Q- And at that time it was devoted to those purposes? A- Yes sir.

Q- Do you know about how many inhabitants of this Valley devoted themselves at that time to stock raising and used the lands here for those purposes?

A- One man I think.

8806 Q- One man in this Valley?

A- Yes sir
Q- Who was he? A- Capt Sutter.
Q- He owned the whole Valley?
A- He and his attendants, his partners whoever they were as I understand it.
Q- Were not there not large Spanish grants & occupied by Spaniards in this Valley?
A- That I have no recollection of reading about- I think not.
Q- Any stockraising at that time then?
Mr. Cadwalader There were six Grants in this County.
A There were only two in this County
Mr. Belcher And not one to a Spaniard
Mr. Cadwalader There were two to Larkin- Larkin was a naturalized citizen. The Spanish grants averaged about 150 thousand acres to the County in this Valley.
8807 A- All I knew of was Sutter

and Leidesdorff and Folsom
grants here if there was any
others I did not know it
Mr. Hart Do you remember
when San Joaquin County
was first settled and devoted
to stockraising?
A- Well Sir in a general
way Mr Weber I think
settled there in an early
day but there was no farm-
ing there in 1850.
Q- No farming?
A- No Sir.
Q- No farming until when?
A- Well what I would call
farming must have com-
menced there in 1852
Q- That is the actual cul-
tivation of the soil?
A- Well there might have
been little patches around.
Q- But there was stock-
raising there?
A- Yes Stock raising.
Q- And to a very large
extent? A- Yes Sir.
8808 Q- Have you an idea of

the number of horses and cattle and other stock that there was in the Sacramento Valley when mining first commenced?
A- In 1848?
Q- Yes sir? A- I have not.
Q- But it was a large and important industry in this State at that time was it not? A- Not in Sacramento County to my recollection, when I came here there was very few
Q- In the Sacramento Valley I say?
A- That would include the other side running down to Yaunts:
Mr. Belcher It would not include Napa County. It was not a part of the Sacramento Valley.
A- No sir. My recollection is that the cattle were mostly brought across the plains - I think the Texas steers came from

8809

away low down and were brought up through to the mines whatever beef we did have

Mr. Hart Don't you know that from 1849 until about 1860 the plains of the Sacramento Valley were literally covered with what they call Spanish cattle and Spanish horses running in large herds and bands all over the Country?

A- I knew they were driven up from the lower country here to supply the miners- driven up from the lower Country- the lower way. I did not understand they were raised here.

Q- How long did you understand they were kept here to supply the miners?

A- They were constantly driving them

8810 Q- Don't you know that in

1856 they were not kept to supply the miners but on the contrary a very large portion of them were kept to supply the towns and cities in this Valley? A- In 1856?
Q- Yes sir. And from that time on?
A- Very likely. There were a good many cattle brought across the plains and they increased very rapidly when they came here - the American cattle.
Q- Then as I understand from you the first industry in this State was stock raising, in this country?
A- If you call it an industry there were a few men engaged in it. but only a few comparatively.
Q- About as large a proportion to the general public then living here as hydraulic miners do to the general population of El Dorado County - the owners of

8811

hydraulic mines?
A- No, sir. I would not say that, I would not say that they would compare.
Q- What proportion of the population of El Dorado County own hydraulic mines? A- A very small proportion.
Q- Well how many in a hundred? A- Hydraulic?
Q- Yes, sir, Hydraulic?
A Well for instance the Excelsior mine is owned by the El Dorado Water and Deep Gravel Mining Company
Q That is a Corporation?
A yes sir and hydraulic mines about Volcanoville are owned by private individuals, there are two or three there but they are not running, and the California Water Company own hydraulic mines also there
Q they are not running?

8812

A No sir they are not running and there are mines at Negro Hill I am speaking of Negro Hill now above Placerville. There were mines owned there by private individuals, Mr Ward and Mr Hancock and several others that I know and the Park Canal Company.

Q They are not running are they? A No sir the Park Canal Company own hydraulic mines. That is a corporation

Q They are not running?

A I think they are running the Tennessee Hill

Q How many mines?

A Only one. Then down this way the Lorenis Claim; I am inclined to think that is running occasionally running

Q Hydraulic mining then is not an industry in El Dorado County?

8813

A Yes sir it is an industry there are hydraulic mines there

Q But they are not running? A No sir they are not running at this time

Q Only three in a County with a population of 15000? A I do not know that there are three running, I would not be sure, Now Mr Mason has a hydraulic mine and he had not started up when I left home

Q Well then there are only three at the utter most in a County having a population you say of 15000 — how many thousand?

A About 10000 at this time.

Q Those three mines
8814 are owned by two in

dividuals and a Corporation?

A That are running yes sir, if they are running. I do not say that they are at this time

Q You said that in 1851 when you first came here the three forks of the American river were muddy, what was the cause of the mud in those streams?

A I did not come here in 1851 firstly and secondly they were not muddy when I came here.

Q You say that in 1851 they were muddy?

A I do

Q what was the cause of their being muddy?

8815 A mining

Q What kind of mining?
A Surface mining
Q What was the character of the mining? What was the technical name?
A Placer
Q Placer mining? A Yes.
Q How is that conducted?
A It is conducted with Long Toms and sluices and short sluices - was at that time - 1851.
Q How many miners were there in El Dorado County at that time?
A 10 or 12 thousand I suppose
Q There were 10 or 12 thousand men at work?
A More than that
Q How many? A I should say 20 000: Judge Dibble divided them into those that were engaged in bank bar, and bench mining on the rivers and then

8816 those that were mining

in ravines and streams

Q How many were working on the three forks of that river at ~~#~~ what you call bank and bar mining? A On the three forks I should think 5000 or 6000 men I should think more.

Q During what years were there six thousand men working on the ~~br~~ banks and bars?

A This was 1850 & 1851

Q But you made an estimate of 1851-52-53 and 54. I understood you to say there were 3000 men worked on the three forks in bar and bench mining?

Mr Dibble Bar, bank and bench mining

Mr Hart Q What is the difference between bank and bench mining?

Mr Dibble A great deal

8817 Mr Hart Allow me to

ask the witness

A Bar mining is where parties go on a bar where the gravel is thrown up and the stream runs to one side — a little above the surface of the water of the river. A bench is still higher than a bar; on the bench formed on the bank of the river It is all on the river banks. Bank mining is where you run in the bank away from the bar and not on a bench. That is earthy matter mainly and they take it down sometimes 20 or 30 feet

Q Was there any such thing as drift mining going on there at that time too?

A I did not see any

Q How many men working as they worked in 1851-52-53 and 1854 would be supplied by

the use of the little giant? A with how much water and what fall?

Q Such little giants as that worked in the Gold Run mine and with the same fall that they have there?

A I really do not know the fall they have there or the character of the ground they work

Mr Dibble They have 370 feet

The Witness How many inches of water and what sized nozzle

Mr Dibble 8 inch

The Witness In the first place that sort of mining would be very awkward on a river bar

Mr Hart That is not the question. I want to know how many men it would take to displace as much dirt as could be displaced by a little

8819

giant with an 8 inch nozzle, 2000 inches of water and 360 feet fall?

A In the Coon Hollow mine at 150 feet fall, the duty of an inch of water would not be over 2 cubic yards 1½ or 2

Q And inch of water?

A yes

Q Well you can make an estimate. I want to get the sum total; how many men it would take to supply one of these Monitors where the dirt was the same, working as they did, of course, in 1851-52 53 and 1854?

A On what bank, in what claim?

Q The same claim that they worked in?

A You could not very well use a Monitor in these shallow diggings

8820

Q But I am speaking of the amount of dirt that it could wash as compared with the amount than one, or one hundred or one thousand men could wash. Is it not a fact that you could put that giant against a bank and wash more out than a thousand men could work in a day?

A If the duty of a cubic inch of water is 2 cubic yards a day and there are 800 inches of water, that would be 1600 cubic yards would it not.

Q But in that surface soil there it would be 8 times or 10 times two cubic yards would it not, that soil that they were working in?

A Yes, the soil was lighter

Q So that instead of

8821

two cubic yards there would be 20 cubic yards to the miners inch, and 800 cubic inches a day, as I understood you to say?

A That is to say, if the Gold Run mine was composed of the same material as the surface mining in El Dorado County is composed of, how much more would a Little Giant wash down than a man with his pick and shovel throwing it into a sluice, if it was composed of the same material?

Q Yes working in the same material?

A It does not make any difference what kind of material they are working in. I want to find out how many men it takes to make up the force of a Little Giant operating on the soil. Would it not take at least 1000 men?

8822

A I do not understand you. If you give me 800 inches of water and then give me 1000 men with picks and shovels, you ask me now if you cannot throw down as much gravel putting that fall on it, as I can throw down with a thousand men with picks and shovels with the same water without any fall; no you cannot do it.

Q I say with the same dirt. I did not say with the same water, working as they did in 1851-52-53 and 1854. They worked without water did they not, excepting to carry the dirt to the water and wash it in the streams?

Mr Rhodes. Such water as they had

Mr Hart Yes, putting them in the same condition they were in in

8823

1851-52-53 and 1854, I ask you if a little giant operating as it does, would not be the equivalent of 1000 men operating as they did in the same soil?

A In the same soil! I have not any figures for a basis. I would very freely give you my opinion about it if I could get the data. I would not think though it would do the work of a thousand men.

Q How many men do you think it would do the work of in the same soil, they working as they did and it working as it does now? A Well I would put it at about 200 or 250 men.

Q You would think 250 men could wash out there 1600 cubic yards a day? A They ought to wash more than that.

8824

Q How many inches of water would there be running from a pipe of that kind? A with an 8 inch nozzle? Q Yes.

A And 350 foot fall?

Q Yes. Miners inches?

A If you fill your pipe to the top and all that sort of thing, a nozzle of that size ought to take 2000 inches of water— if you fill it full

Q Would it not take more than that? A It might more. I never saw an 8 inch nozzle really. I am just forming my estimate on a smaller nozzle. That is a good sized stream of water

Q That would make 40000 cubic yards it would wash per day if it washed 20 cubic yards to an inch out of that kind of soil?

A will it wash 20 cubic

8825

yards to an inch of water?

Q I asked you if it would not? A No it would not.

Q I understood you to say it would wash 10 times 2 cubic yards out of that kind of soil?

A No, I did not say so

Q You say it would not wash 20 cubic yards to the inch out of that top, loamy soil of El Dorado County? A In the hydraulic mines that are there it won't wash 2 cubic yards to the inch

Q It wont wash 2?

A No.

Q Do you give that as your opinion as a miner?

A Yes. I give that as my opinion as a miner and from my experience In the Excelsior claim the duty of an inch of water is not to exceed 2 cubic yards

Q That is upon the same

kind of soil? A That soil, that claim.

Q The red, soft, loamy upper soil of those mountains there?

A No it is not. It is compact and some of it is cemented and quite hard.

Q Oh yes! But I say on the upper soil such as these men were washing at that time?

A I should say it would wash easier and there would be more than 2 cubic yards. But there would not be 20 in my opinion there would be more than 2.

Q There would not be 20?

A I do not think there would be. I think 20 cubic yards to an inch of water is too much.

Q How many cubic yards do you think it would wash of that kind of soil?

A Well it might wash

8827

from 5 to 10

Q Would it be more than 5 and less than 10?

A More than 5 and less than 10

Q About 8 would it not?

A Well my judgment is that the average top soil that there is through there it ought to wash 8 cubic yards of

Q That would be just about one miner's inch to a man, according to your former estimate?

A It would, if that is the way I estimated That is my opinion

Q That would make a Little Giant equal to 2000 men then, if it had 2000 inches in it?

A Well, with those sort of diggings I do not think the Little Giant would exceed 250 men in that sort of soil give me the same amount

8828

of water and give me a
fall where I can run it
off and work with picks
and shovels and with 250
men I will do a good
deal of work; a big
job and very quick

8829

Q You say there were ten or 12000 men at work outside of River mining. Where were they at work?

A They were at work at Negro Hill, Salmon Falls. at Vaughns store, at Cold Springs, Coloma, Michigan Flat, Uniontown, Rock bridge, Hangtown or Placer-ville, Weaverville, Kelsey Spanish Flat, Greenwood, Spanish Dry diggings Louisville, Georgetown and Volcanoville. These towns were there trading posts.

Q About how many of them tailed into the Cosumnes River?

A Not one grain of the tailings went into the Cosummnes.

Q Of the mines in Eldorado County?

A Those mines I have mentioned and I am mentioning all drain into the

8830 South and Middle Forks

Q How long has it been since these mining Camps have been actively operated or worked?
A Well they Commenced going down in about 56 and 57. Gold Hill is a town I did not mention It was a very important mining Camp. there were hundreds of acres mined off around it.
Q How long is it since they have been working at Coon Hollow; that is to any Considerable extent
A They Commenced hydraulic mining at Coon Hollow in 62.
Q They were working there long prior to that and the town of Coon Hollow was situated on the Claim that is now washed off. on the top of the hill. There was a town of a 1000 inhabitants
Q There is now?
A There was. There is no place there now. there

8831

are two or three people
living there.
Q When did it commence
going down?
A About 58 - 57 or 58
Q How many people were
there there in 62
A There were not many
Q How many?
A Very few. there were
probably a hundred.
Q It had gone down from
a thousand to a hundred
in 62?
A I think so
Q How long did they
continue hydraulic mining
there?
A They are working now.
that is they are not running
now but they have there
Giants there and there pipes
Q The only population there
now is the men who are
required to run one mine?
A Yes
Q About how many?
8832 A They ~~im~~pounded there

tailings in that mine and washed these tailings over again, washed them twice, take both branches working and washing the second time the number employed would not probably be over 25 men
Q When did Salmon Falls commence going down?
A That commenced going down probably in 56.
Q What was its population in 56?
A That I do not know.
Q About what. You said it was an important town?
A It was an important town in 51-52-53
Q What was its population in 51-2-3?
A Salmon Falls and vacinity New York ravine and the section of country that traded with Salmon Falls, probably had a population of a thousand or 1500 people or more.
8833 Q How many are there now

A Fifty or a hundred perhaps.
Q How long has that 50 or a hundred been there and composed the population of the place?
A Ten or 12 years.
Q How many people were there there in 62?
A There were probably 50 or 100 people there, or more
Q Vaughns Store; what was the population of that in 52-3 up to 56?
A The people that were trading there included, 200 or 300 men
Q What is its population now?
A No population.
Q Nobody there at all?
A No
Q Weaverville Creek; what was its population?
A Weaverville had a population of 2 or 3 thousand - there and its surroundings.
Q What is its population now
A I guess there are two men now

8834

Q Cold Springs.
A Cold Springs had a population of a 1000 I think
Q What is its population now
A There are two or three men there
Q How long is it since it has had two or 3 men?
A It has been 10 or 12 or 15 years
Q Was there an Aurora City?
A Aurum City
Q What was the population of that in an early day
A They cast 192 votes, There were about 3 or 400 there
Q What is the population now
A There is a quartz mill running, there are probably 75 or 100 men.
Q 100 men?
A Yes. They are running a quartz mill near by there. The town is all run down though
Q There is no town there?
8835 A No

Q How long has that population of 100 been there

A They never have had any less. The quartz mine has been running there since 51 or 52

Q How about Rattle Snake what was its population

A That is in Placer County. That had a large population; a thousand men I should say

Q What is its population now

A Nothing

Q Nobody there?

A No.

Q Spanish bar?

A Spanish bar was quite a town. Nobody there now.

Q What was its population?

A Several hundred.

Q Grey Eagle?

A Grey Eagle was several hundred

Q Nobody there now?

A No

Q Wild Goose?

A Wild Goose, called Wild Goose Camp, was an important camp there are one or

8831

two men there now, two or three.
Q How many men were there in 50?
A Three or two
Q When did it commence running down?
A That commenced running down in 53 & 4.
Q When did it fully run out
A It ran out in 64-65 or 66
Q Pilot Hill?
A Pilot Hill ran out about the same time.
Q What was its population
A The population was 400 or 500.
Q Volcanoville?
A Volcanoville had I should think a population of about a thousand.
Q When did it run out?
A It ran out, that and the adjacent country, miners who came in there to do there trading - I do not mean right in the town itself - about the same time when the

8837

surface mines were worked out

Q Spanish Dry diggings?

A Spanish Dry diggings was a town of 300 or 400

Q What become of that place

A Well there are probably ten or 15 men there now, or twenty

Q If there is so much gold left in the earth in proportion to the amount that has been taken out, why is it that these towns have all become depopulated

A The towns have become depopulated on account of the surface diggings being washed out. The mining now in Eldorado County is quartz and Hill mining, either Cement or gravel that you can hydraulic, and drift mining. They are mined by Companies of men.

Q Corporations?

A There are only three Corporations, four Corporations

in the County that I know of in the county that I know of that are running mines
Q How many men who reside in Eldorado County at this time are actually and actively engaged in mining
A There are but few. But all of the ranchers mine more or less during the winter season, they do not make a business of mining. they have ranches and when water comes, when they can get free water, they mine. They have mining claims and if you include those together with the regular miners—
Q [Interrupting] No I include the regular miners
A Those who do nothing else than follow it as a business
Q Follow it as a business
A I will just have to give you the mines, those that
8839 I can think of and about

there force, and you can figure it up; I have not made a computation so that I could tell you now. I might do it, or you can do it as I call it off; There is the McNulty 25; the Church Union 75; the Lyon mine 10; the Gross 50 the Mount Pleasant 30; the Milton 10; the Morey 15; the Artic 10; the Polar 5; the Chrystal 10; the Eldorado deep mining Company 30; the Lion 60; the Cedar Spring 25; The Cumfa 20 or 25; the Benfelt 10 or 15; the Mason 5; and then working in different places probably 250

Q Besides that?

A Yes. Then over on the Georgetown side - I have not got over there at all yet - The Chapperal about 20; The Rosecrans 20; Another mine whose name I will think of in a few moments

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about 25; the California Water Company 30; and then there are some miners about Coloma; I know of several there; I will put them at 25. In Uniontown, say 10; Georgia Slide and ~~Georgia~~ Canyon Creek and the mouth of it I should say 25 or 30; Greenwood 30 or 40; Spanish Dry Diggings in the Grit 10; then of course there are several others that I have omitted, beside those I have spoken of. There are others miners of course on these different ravines. There are two Companies above Weaber Creek that I have not mentioned, that I saw working there the other day and five or six men in each Claim. There is one right at the bridge on the old stage road. I saw six men working there as I came along in the stage. You probably can add to that several.

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Q How many?

A. Probably 100, probably 200

Q. That makes according to my figures 1165. Now what is the population of the County? A. It is about 10000

Q. And out of a population of 10000, there are 1165 persons that were engaged in mining in El Dorado County? A. These ranches that I speak of mine more or less during the winter

Q. Now how many of those are hydraulic miners?

A. I have not calculated on but five I think

Q. Five hydraulic miners?

A. Yes I think the Mason mine is now running.

Q. How many of them are quartz miners, what proportion? A. The Church Union, and Polar. I could not tell you without making a little estimate. The Church Union and Polar, The Arctic

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and Mount Pleasant and Placerville Mine. I have not got in quite enough. I did not mention the main mine in sight of Placerville, the great quartz mine where they are running all the time, about 75 men. I forgot all about that although it is right under my nose

Q. That 200 will cover that, will it not?

A. I am naming you those that are quartz mines. The Grand Victory - that is a 50 stamp mill and the Lyon mine that is a quartz mine

Q. Well, about what proportion of them are quartz mines? A. Well, I should say over half

Q. And the balance outside of the quartz miners are drift miners are they not, and placer miners?

A. Drift miners and placer miners, working in the ravines

the old diggings and the tailings.

Q. How many are drift mining about what proportion?

A About 1/4.

Q. And the balance are placer mining working in the ravines?

A Yes.

Q. What industry does the balance of the population of El Dorado County pursue at this time regularly for a livelihood?

A Well, some practice medicine, some law, blacksmiths, merchants, traders of different kinds and teamsters. There are a great many teamsters hauling supplies from Folsom, and cutting wood and timber for the mines and attending ditches

Q And farmers?

A Farming, raising fruit and farming, general farming. There is a good deal of farming going on in that County and a good deal of fruit

8844

raised

Q Fruit raising there now has become the main business has it not? A. Not the main industry. Fruit raising produces an income of from $250000 to about $300000 a year There is a good deal of it consumed there and they ship some

Q. They raise Angora goats there somewhat do they not?

A Yes.

Q Anything else? A Sheep

Q. Many sheep?

A. In the summer time the mountains afford ranges for sheep and cattle. They are mostly owned however in Sacramento County and they drive them up there during the summer season for pasturage. There are a few goats there that are owned in the County — Angoras

Q. Now you estimated the mining revenue from dragging, from rough — I do not know exactly what that is but I

8845

Suppose it is the amount of material moved between 1849 and 1862 as being a certain number of times greater than that which has been removed since 1870. How did you make that estimate?

A. I make it from observation, and from taking a certain locality and estimating the depth and acreage of it and by looking over the whole ground and making an estimate in that way, and from the number of miners that were at work from 1849 up to 1862 and then the comparatively small amount of territory mined over since 1870

Q. Mining has not been extensively followed up there since 1870, has it?

A. The ravines were all worked out although Haytown creek for instance is being worked over every year

8846

in different places and Weber Creek is, when the miners above are not running there tailings into the Creek so that they can go into the creek they go in there and work, but the difficulty of working in those streams is that the mines above run there tailings into the main stream and drive them out of course but they have been working in those different ravines, straggling miners off and on since then but formerly there were all worked out and now they content themselves with less pay than they did formerly.

Q The greater portion of the mining now is not placer mining as it was, conducted with pick and shovel but is conducted with stamps it is quartz mining drifting and also hydraulic

8847 mining proper?

A Yes that is the main mining. The balance is the little straggling mining There is an industry there that has been growing for the last ten years that I have not mentioned that has become very important, That is Seam diggings, The French Claim at Greenwood.
Q How is that Conducted
A It is Conducted at Greenwood - it is Conducted by hydraulic - they hydraulic out the seams and at Georgia Slide there are Seam diggings and there are Seam diggings about Mud Springs that is Conducted mainly by pick and Shovel but at Green wood they hydraulic it

8848

Q- What is the different between drift mining and hydraulic mining?
A- Drift mining is where you run tunnels along the bed-rock and take out the earth from the bedrock up say the hight of your drift or the hight to where it will pay best - five feet, four feet, three feet.
Q- And a hydraulic mine-?
A- (Intp) They drift it out and take it out to mouth of the tunnel and accumulate a large pile and then they turn they hydraulic on to it. It is hydraulic all the same.
Q- It is not called hydraulic mining? A I do not call it hydraulic mining proper
Q- That is drift mining?
A- Yes.
Q- What is hydraulic mining proper? A That is where you work with a heavy pressure of water through a Monitor against a bank or mountain.
8849 Q- And knock the mountain

down to the bedrock?
A- Knock the mountain down to the bed rock and wash it through the sluices.
Q- The difference between drift mining and hydraulic mining is that the entire bank is taken down in hydraulic mining proper while in drift mining they drift under for the pay dirt? A- Yes that is it.
Q- That is it - that is the difference? A- That is the difference That is properly a hydraulic mine.
Q- The difference between the mining previous to 1862 or the early day mining when there were ten thousand or twelve thousand miners at work in the Forks of this River and the mining at this time is in the extent of the claims and the number of persons engaged in it? To make myself more clearly understood there were more people at work then but the

8850

mines that are conducted now are much more extensive in their operations than in 1851 and 1852?

A- Yes. The claims are larger. It costs a great deal of money to fit one up- thousands and thousands of dollars to get ready to mine.

Q- The depth to which they worked them is greater and the amount of dirt that is sent down per day per single man is very much greater?

A- Yes very much.

Q- I will ask you whether or not it is a fact that the Gold Run Mine say which is a hydraulic Mine sends out more dirt into its dump and out of the main pit than all the drift mining in Placer and El Dorado together- drift mines?

A- Well really I know but very little about the Gold Run mine, although I

8857

have been there.
Q- Well take it at the large mine at Placerville, the Excelsior Mine?
A- Well I should say they disturb or move a great body of it. The great body of it does not get away. The dump that was there in 1862 at the Excelsior Mine is there today. The sand has only gone.
Q- It removes more than all the drift mines in both those counties together & combined?
A- I do not know much about the drift mines at Damascus. I hear they are very extensive. I have not been there for a good while - and about Last Chance.
Q- I will ask you whether or not it is a fact that the Excelsior Mine removes more material than all the quartz mines in El Dorado County combined?
A- Well that might be gathered from what I have already

8852

stated. The duty of a gravel stamp is six tons, a little over. And the duty of a quartz stamp say is a ton and a half. There are sixty five gravel stamps and about 135 quartz stamps One hundred and thirty five quartz stamps would crush one and a half times one hundred and thirty five and the gravel stamps would crush six times sixty five and the duty of an inch of water on the bank that I spoke of is not to exceed two cubic yards and they use a small Monitor

Q- How large? A- Four inches I guess. I think so I judge from the size of the stream.

Q- How many inches per day would that discharge - miners inches? A- About 250 or 300 - 300 perhaps.

Q- That would be six hundred cubic yards which would discharge daily. How much does a cubic yard weigh - two tons does it not?

A- No - sir.

Q- It does not weigh two tons?
A- No sir.
Q- What does it weigh?
A- I should say it weighed about a thousand pounds?
Q- Did you ever see it weighed?
A- Well sir that is my judgement
Q- Did you ever see any such a thing as that weighed
A- I saw a carload weighed. and I am judging by the size of the carload and I am inclined to think that a car load ought to be a cubic yard. It may not be quite
Q- Is your judgement as to the weight of a cubic yard of this material do you think founded upon as reliable information as your judgement upon the other matters about which you have testified in this case?
A- No sir I do not think it is, because really that is my recollection of what the car-load weighed.
8854 Q- You would not swear

that it would not weight two tons would you?

A- Well that is not the way I usually swear. I swear that I do not think it will weigh two tons.

Q- You testified this morning that that material - that blue gravel that blue cement before you when pulverized was very light?

A- No, sir. Not very light. It is lighter than some other kinds of sand that we have up there.

Q- What other kinds of sand are heavier?

A- It is a black sand with greater consistency than that

Q- Is quartz sand heavier?

A- I should think it was about the same heft perhaps I should think it was a little heavier.

Q- You think it is a little heavier? A- Yes, a little.

Q- You testified that of

8855 the material coming from

the Gold Run Mine not over five percent dumped into the stream would flow down the River 40 miles did you not?
A. I Sir? I do not believe I did.
Q. Now I will ask you if you have any means by which you can make an intelligent estimate as to the distance that it will flow down the stream?
A. Two weeks ago Mr. Hamilton Smith in a letter requested an answer to certain questions or desired certain information in relation to the mines of El Dorado County. I think it was two weeks ago perhaps more. Prior to that I had only been what might be termed a very good observer of things about me there but since that time I have spent a good deal of time in riding over the country mornings— every day when it did not
8856 rain since he wrote me

the letter in order that I might have a little better than a raw judgment in relation to it, from old recollections and all that. I went to the Excelsior dump - the dump there at Lemon Hollow. I examined it and examined the character of the dump and the rock and saw its decay. I brought away some of it that had already pulverized and slacked the rock larger than that, that had all decayed and was all sand. I have it down at the Hotel. I also took a rock three times the size of that and it had cracked open by the action of the atmosphere. I took that out. That was in the process of decomposition and I formed an estimate about that kind of rock Then I went down Weber Creek. I became familiar with the dump of the Excelsior mine and familiar with the dump also of

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the Loomis Mine which is above there to see how far this rock would float down the stream and to see how far it would go by the heavy waters of Weaver Creek. The dump commenced forming there in 1862 and a great deal of it is there now, and I estimated it from my observation from the closest observation I could make that you can not find any of the Excelsior dump two miles and a half below the dump today.

Q- The question is have you any means by which you can form an intelligent estimate as to the distance that material from the Gold Run Mine would be carried by the waters of the American River? That may be answered, yes or no?

Mr. Belcher We object to this
8858 question because it is not

crossexamination. Here was not asked on the direct examination in relation to the Gold Run mine and this is immaterial.

Mr. Dibble I object to it upon the ground that we asked the witness no question in reference to the Gold Run Mines whatever nor did I know until now that the witness had ever been to the Gold Run mine and therefore this is not in crossexamination.

Mr. Hart I will put the question in this way: I will ask you then whether or not you have any means by which you can form an intelligent estimate as to how far the water of the American River as it is running will carry a certain character of material in suspension?

Mr. Dibble I object to that question upon this ground: We extended the

courtesy to the learned counsel to examine very fully on that matter and to interrupt the direct-examination for 15 or 20 minutes with an examination as to the witnesses means of knowledge to make an answer to the question which I propounded. The Attorney General with a good deal of ability asked a great many questions in reference to the matter and this was one of them

The Court over-ruled the objection.

A- All I know about it is by-

Mr. Hart (Guity) I have a right to ask you whether you have any means by which you can form an intelligent judgement and you can answer it yes or No? A- I think I have.

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Q Did you not this morning in your examination Coming in your testimony in response to an examination to which I subjected you testify as follows: I do not believe there is any man that can tell how far the water of the American River in that stream as it is running will carry a certain Character of material in suspension. I believe it is impossible

Mr Belcher That was in answer to one of his own questions and he has no business to repeat it or to inquire of the Witness if he said so. If he made that statement the record shows it.

Mr Dibble I think the Witness did state in reply to the Attorney General Something of that Kind and he afterwards explained what he means by it

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The Court Let him explain it again it will take less time.

A I stated to the Attorney General—

Mr Hart I insist that I have a right to have an answer to this question— whether he said this

Mr Belcher We object the record shows what the witness said.

The Court overruled the objection and Counsel for defense excepted

(The reporter read the question)

Mr Hart did you testify to that

A my recollection is that I did and I think I also explained in the answer that I made in relation to scientific formulas, I said that if the formula in relation to the carrying capacity of water was based on the South Fork

8862

of the American River then I would believe the formula to be Correct or if it was based on the running of the waters in Weber Creek then I would believe the formula to be Correct but I do not believe any estimates by scientific men, any formulas made by them as to the Carrying Capacity of water amounted to anything when Compared with the south Fork or the streams we have here in California. I understand these formulas are made on running water in a sluice or on a smooth surface.

Q The question at that time was not in relation to scientific men. The question was whether or not you could tell anything of that kind and you stated that you could not and that was impossible for anybody to tell anything

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of that kind and then I said to you if that is so that ends it and I will not question you any further?

A I say that you cannot tell as a matter of course how far, I cannot tell but I have given you the best of my judgement by actual examination as to how far the water has carried the rock. From that I judged how far it would go

Q How many million of cubic yards have been thrown into the stream the South Fork of the American River and above Placerville or above the point where this Excelsior mine is located,?

A The Excelsior mine is located at Coon Hollow— and from the Excelsior mine which dumps into Weber Creek and down to

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the mouth of Weber Creek
where it empties into the
South Fork is probably
15 or 16 or 17 miles
Q How many million
of cubic yards have been
taken out of the earth
by the miners at and
above the Excelsior mine
along the banks of the
American River and its
tributaries?
A I could not give you
an opinion even without
making some computations
and then it would be
simply what I think
about it.
Q How many millions
are still in the stream
at this point?
A That I cannot tell
Q How many millions
have gone below the
points where you were
from the mines — at the
Excelsior mine and above
8865 that point?

A Well a great many perhaps.

Q Do you know how many

A No sir as a matter of course I do not know

Q Was it less than 20 per cent or 80 per cent of the amount that has been taken out — the amount that has actually gone below the points where you examined the stream

A The surface mines all along on all the tributaries that have been mined — the top washings vary from two to five feet and they have been of earthy matter and insoluable so to speak. I do not suppose you can dissolve it. I think it is insoluble.

Q What proportion of the amount of material that has been taken out of the dirt, out of the earth at those places has actually

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gone down the stream?

A From 1849 up to 1862, the surface mining done at that time, I should say that of that character of mining perhaps 50 per cent or over went down, perhaps more, because it was the light material and on top and these heavy floods of 1862 would sweep it down. They would throw back dirt, for instance dig pits and throw the dirt back, and when the floods came they would carry that all away. It would be light material and since then from these hydraulic mines a very small proportion goes down the stream, the sand and finest gravel only.

Q You say a very small proportion. I am trying to get at your calculation. You do not know how many million cubic yards have been put into the stream

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you ~~do~~ not know how many million cubic yards are still in the bed of the stream, you did not see it actually come down, you never measured it and now what is the basis of your judgment?

A. I am not stating how many have gone. I am not giving any judgment in relation to the matter. I say that I think about 50 per cent, or one half from the surface washings, perhaps more would naturally go down the stream. That is my judgment

Q. Now why do you think so?

A. I think so because you take 3 feet of the top earth and ~~throw~~ it in the water and the sediment that you would have would be very light, very small compared with the whole bulk of your surface.

Q. You think that the water would naturally carry

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material of that weight?

A Of that kind, yes sir, it is light and porous.

Q But you do not make any estimates from actual examination made within the last two months, you make it from your general knowledge of the carrying power of water, do you not?

A Yes sir

Q Now then, since that time how do you make your estimates? A. Since what time?

Q Since 1862? Since the time when the surface washings were made?

A The character of the ground has more density as a matter of course, there are more boulders and rock, it is bottom ground and gravel and it remains on the dump pile but the coarse sand and fine sand and the smaller pebbles go a very great distance

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Q. You make that estimate from the character of the material and the carrying power of water, too, don't you?

A Yes sir

Q. Not knowing the amount that was put in and the amount that has gone down?

A Not knowing the exact amount, of course I can see a mining claim, for instance I can see an acre of ground and if it was 5 feet deep, that will wash off, and I know that an acre 5 feet deep is gone and has gone into the ravine, and if it has been of this light top material I say that 50 per cent and over 50 per cent has gone down here into the Sacramento.

Q You say that from your knowledge of the carrying power of water?

A The force of water upon material thrown into it

8870

yes sir. I have seen water used four or five times over

Q Now then what is the velocity of the American River the South Fork of the American River between the point where Weber Creek puts in to the South Fork of the American River and its junction with the Main American River?

A I do not know I never saw it computed. If you want to know what I think about it, I have seen the river at all stages

Q Sometimes it runs 24 miles and hour dont it?

A I should think so, at places, at certain places, and at other places it would not run very fast.

Q. But when it is running at 24 hours at places it is not running less than 15 miles an hour at any place is it?

A Well, it might in some places.

8871

Q Not very much less if less at all, dont you say so?

A Well, that might be.

Q How great must be the velocity of water in any kind of stream in order to carry all the sand, that is, that is lying loose upon its bottom? A Well, that I could not say as a matter of course. I never saw a stream half sand yet, except where the bedrock has bared and is smooth, where every thing is washed off; but where the cobbles and the rock will remain there you will always find sand in the interstices.

Q. A stream running 3 miles an hour will carry sand in suspension will it not, four miles any way?

Mr. Belcher He says he does not know and we make the objection that he has been over this

8872

ground once before

A. Of course I do not know, I could not tell you Mr. Hart. You do not know whether a stream running four miles an hour, will carry sand in suspension?

A. I think that it will carry sand running along. I am inclined to think that it will at the bottom. I have made that test, I have taken up the water of Weber Creek during the last several days and settled it and showed the amount of sand in a certain given quantity of water in Weber Creek, a fair sample, how the sand will run. I judge at that point above the O'Keefe bridge there were about 4000 inches of water running in the creek and I have some judgment as to the velocity of water.

Q. That sand has deposited there when the water has

that its current, has it not, being deposited there every month that they are running hydraulic mines?

A There are no hydraulic mines or any other mines running on Weber Creek or any of its tributaries at this time

Q. There had been?

A There had not.

Q. Never have been any?

A There had been

Q What mines had been running there?

A Well, probably 500 of them or a 1000 mines

Q. Some of the sand had been brought down to the place that you mention and dropped.

A. I also took a sample near the head of Weber Creek on the 24th of December and there I found sand and sediment in the water and it comes from the hills and comes from everywhere, there is a granite belt there, and then

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is a good deal of sand comes from the decomposition of granite

2 If a stream running 4 miles an hour will carry sand in suspension how large a rock will a stream running 10 miles an hour carry?

Mr Belcher I object to that, that this kind of examination has been gone over once before.

The Court. He told you he knew no formulae

Mr Hart. He dont know anything about it, I think it is a guess. I think Judge Blanchard is guessing at this matter, Is not that a guess Judge?

Mr Belcher I object to that. That has been gone over once and it is not proper to repeat it

The Court. You can ask him the basis of his knowledge but it seems to me that

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he has been asked enough about it

The Witness I arrived at it in the same way I would estimate if you would ask me how far it was from where I sit to this door. I may give you an idea of the distance, I have a judgment about it, you ask me that question and I will tell you how far I think it is

Q. Well, that is an opinion that you formed?

A. Well, you may call it what you please. I base it on my capacity to judge of distances by my eye, it is just so in all these other matters, I have a foundation for it, I have an experience in the matter, you ask me how many men there are in this room. I have not counted them but I could give you my judgment. You can see how near I will strike it

Q. Now you speak of the wash of plowed land in El Dorado County, how much land are you farming there?

A Well about 60 or 70 acres

Q Where is your land located with reference to the American River?

A. It is located on the banks of Weber Creek, it runs down to Weber Creek.

Q How far from Placerville?

A It is about 4 miles

Q South of Placerville or north of Placerville?

A South, toward Mud Springs

Q What is it in a Canon?

A No sir, it the levellest piece of land there is in that section of the country

Q What is it on top of the hill - table land?

A Table land - It is rolling land all about there.

Q. Where you - you have a race track on it have you not? A No sir, I am building one there

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Q. There is a race track near the town of Placerville: Where is that?

A Yes sir, I am connected with an association there, I am the President of it that has a race track. I presume you have heard of that

Q That farm that you refer to having a race track on it, is located on a high hill? A Yes sir

Q Flat on top?

A Yes sir

Q. You have it on the lower ground? A Yes sir

Q How deep has the soil washed off of your land?

A That I can not tell. I know the plowed land washes every winter and washes badly.

Q It is washed off an inch? A That I could not tell

Q How many years have you been farming?

8878

A Well, I have owned the place, I have had it farmed for 7 or 8 years

Q How deep is the soil?

A It varies from 3 to 10 feet

Q. You can not say that it has been washed off an inch in 8 or 10 years?

A. The cultivated portion, no I could not tell. All I know is that when heavy rains comes it washes gulleys in it, and there is one little sag there is there that I got the men to put in some brush to collect it, and I have thick dams in Indian Creek which runs through my farm for the purpose of catching the sediment to make the land, and then I judge from the filling up of those 6 dams somewhat of the amount running and the character of it, and then on the plowed land I have a large vineyard

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Q. Your main object or one of your main objects in farming is, to prevent the washing away of the soil is it not?

A How is that?

Q One of your objects in farming is, to prevent the washing away of the soil, you do not do anything to cause the soil to wash away?

A. My object really in farming was — I have a taste that way and I have a vineyard

Q You try to preserve the soil as it is dont you — you try to prevent the soil from washing away — dont you? A. I dont do anything to it

Q. Do you turn a pipe on it and wash it away as fast as you can?

A No, I dont pipe it, or dont do anything to hold it

Q Your object is to prevent anything occurring to your

8880

land as far as possible that would tend to wash it away? A. I have not any object, really General, about it. The land lays there and I have it plowed, and sowed, and cultivated, and the rains come upon it and washes it, and I really never had any object about it

Q Well, all farming lands wash to some extent while it is raining dont they?

A That is my opinion, yes, sir

Q And always have?

A Yes sir, side hills more than flat level lands.

Q Can you mention any farm of these 14000 acres in El Dorado County that is washed off to the extent of a half an inch?

A I can not. I can mention you places in the land that are washed three feet

Q That is in gulleys?

8881

A In gutters, yes sir

Q That washes little gutters down into the canon?

A Yes sir, and it runs thick, from every rain it runs thick with the top soil

Q. It gives a place for the water to run down and forms a channel for the water as it comes down the hill?

A Well, it certainly does form a gutter, but we plow them, level it off every season right along.

Q Those gutters are usually narrow are they not?

A Yes sir

Q Little narrow gutters?

A Yes sir, a great many of them through the land

Q And the washing that you speak of is confined to the wet seasons?

A. Yes sir

Q. Seasons when the rain is falling rapidly?

A Yes sir

8882 Q. How many mountain

Slides have you ever actually seen in El Dorado County?

A Never saw but one coming. I have been on the ground where it was freshly made within a day or two or a few days.

Q How many have you known of being made freshly in El Dorado County since you have lived there, mountain slides?

A I have not known of but 5

Q Take all 5 of those and put them into the pit of the Gold Run Mining Company would it fill that pit? A Yes sir, I think so

Q Would it more than fill it?

A. I was at the pit four years ago and I have to judge of the pit as it was then

Q. Take all five of those and add five more to them exactly like they were would they make up for the amount of of washings on the Gold Run Ridge?

8883 Mr Belcher Objection He does not know

any thing about the Gold Run Ridge?
A. I do not. I saw the pit. I went to the pit at Gold Run and I have been at the diggings at Dutch Flat also.
Q Take all 5 and add 5 more to them and would they make up for the washings from the Excelsior Mine
A I think that half of one of them would make up for all the washings of the Excelsior Mine

Q Of that district, the mining about there or the pit alone?
A. The pit you speak of. This slide that I speak of, the big slide that went down with the American River was variously estimated from three to five miles long running clear up on to the hill, following the river up for 75 feet deep and some five miles long, sliding down timbers and every-thing.

8884

Q How many cubic yards? A Oh I do not know. I have given you the length of it

Q Has that been washed away? A Yes sir it slid into the river and it washed down it finds a level grade, rocks trees etc; there was a slide in 1878 that washed out there 50 feet deep that is on Pierson's grade

Q That is there yet is it not? A The slide is there but it is bridged over for the road, it washed the road away

Q But very little dirt went down there?

A An immense quantity; 50 feet deep; up clear to the top of the hill it cleared it all out to the bed rock down into the South Fork

8885

of the American river.

Q How long was that slide up and down the American river?

A Up and down the river not a great ways not over 30 or 40 feet perhaps, but up and down the hill the whole amount must have been half a mile it slid down

Q You say you have known of five slides since you have been there? A Yes sir

Q Where were the others?

A There were three of them on the South fork of the American river, three slides and then on what is called Big Canon

Q Now those comprise all the slides that have occurred in El Dorado County since 1851 do they not?

8886

A Not a fiftieth part of them according to my information I am telling you these are slides that I witnessed myself or saw, but I have heard of other slides. This is simply a little ways on one river. Well there are thousands of ~~ravines~~ surface washings and Cañons and they are sliding every Winter so I hear. but you are asking me about what I had seen

Q You do not know anything about it?

A I never saw them You asked me if these were all the slides in El Dorado County and I say "No".

Q I asked you if you knew and you said you did not know of any more

A No sir I do not personally know of any more

8887

Q I understood you to say that some of the old dumps of mines have rocks which decompose and form sand?

A yes sir I do.

Q And they wash off down? A yes sir

Q Do you include that in the natural washings?

A yes sir, I do.

Q What kind of rock is that? A well it is sand rock, it makes sand when it is decomposed

Q It is about the same kind of rock that all those pits are formed of is it not?

A There is a great proportion of it — I would rather bring the rock here and you can see it for yourself. I have them in process of decomposition

8888 Q What I want to get at

is that the great proportion of the present deep mining ~~comes~~ is of that kind of rock?

A A great deal of it is

Q How long does it take it to decompose?

A Some of it two or three years and I would suppose some of it five or six, some of it 8 or ten

Q And when it decomposes it forms sand and then goes down the river and you call that natural washings?

A yes sir

Q So that this proportion of the rock whatever it may be that decomposes which mining Companies put in under their dumps and in the streams will eventually come down after it decomposes?

8889

A A great deal of it will come

Q Did you include that kind of wash in the term "natural wash"? when you said that the natural wash in El Dorado County is more than 25 times as much as the wash from hydraulic mining in that County?

A I said if you turn all of the water in the ditches and reservoirs constructed for mining purposes in irrigation, irrigating the hills there, that in my judgment the wash from that amount of water, furnishing land for it would be more than twenty five times more than all the wash now from the hydraulic mines running in El Dorado County

8890 Q But didn't you say

that the natural wash in El Dorado County is more than twenty five times as much as the wash from hydraulic mining in that County? I have got it down so and I want to see whether you said it.

A I do not recollect whether I said it. I think probably it would amount to that

Q Now in making that estimate do you include in that estimate of natural wash the wash from these decomposed boulders and rocks formerly put into the streams from the mines?

A Yes sir

Q And comprises a very large proportion of the natural wash?

A A good deal of it - some of it

8891

Q But in making this

estimate you take into consideration the fact that there is only one hydraulic mine in El Dorado County at work? A I have named a number of hydraulic mines, really there are a good many hydraulic mines there; I stated that I thought there were only two or three running perhaps

Q I understood you to say at that time that there was only one running and my understanding was that the natural washing comprising all these different kinds of washings was 25 times as much as that mine sent out from its dump?

A I do not know whether I said it or not.

Q Well is that the fact? A That is my

8892

opinion sir

Q Speaking of lands that have been formed in El Dorado County by tailings, what kind of tailings is it that forms good land?

A The Lyons Garden is composed of this kind of rock crushed up <No. 1.> That that is taken out from the bed rock 100 feet below the surface

Q Mixed with other soil?

A No sir, they run it right in and make soil out of that very stuff

Q How long does it take that to decompose?

A They crush it through a mill. It is run through a twenty screen. It is pretty well pounded up

Q How long does it take it to decay so as to make it fit for

8893

anything for agricultural purposes?

A Mr Lyons cultivates it the very next season after he fills up his reservoir

Q Is it good the next season? A Not so good as it is after a few years

Q It grows better?

A yes sir

Q It will raise very little the first year?

A Not a great deal. It will raise something.

Q You say now if it was sent down upon the lands of farmers each year in Sacramento County it would improve the land each year?

A No. The land in the Sacramento Valley as a rule is better land Our land is rated I think at about third rate land. Second or

8894

third rate land

Q So that that would not improve the lands of the Sacramento Valley?

A It would be my opinion that it would not It would improve some land

Q It would be a great detriment to it if it came in each year?

A Some of the lands I say, not all of the lands, there are lands that this water improves vastly undoubtedly.

Q But it would be a great detriment if it came in each year.

A Of course it would

Q Practically destroy the lands for agricultural purposes as long as it continues to come in one year after another is that a fact?

A Well I should think it would be a detriment

8895

to it.

Q You should not think so? A I should

Q What kind of slickens do you say is a fertilizer? A If you name the different kinds of slickens I will pick it out

Q I cannot name the different kinds

A I do not know of but one kind of slickens

Q What do you mean by slickens?

A I mean the wash, in the general term of slickens I mean the wash from the gravel mine that will wash from the dump of a mine down the stream

Q If it happened to be sand do you call that slickens? A yes Sir the general term "slickens" I mean now — come to give it a narrow

8896

definition it is this slum-gullion, this puddling stuff, vegetable mould

Q Take for instance a deposit of 6 feet of sand on a piece of black, adobe soil would you call that a fertilizer — fertilizing it?

A To put six feet of sand on top of the adobe soil?

Q Yes sir A No I call adobe soil a good fertile soil and a little sand mixed in might make it a little more porous, it might make it hold moisture better and make it stronger land

Q But a great deal of sand deposited on top of it would destroy it?

A Six feet of sand would be sand, it would not be adobe

8897 Q It would not produce

anything but willows would it? A Yes sir.

Q What would it produce?

A It would produce potatoes and corn and different kinds of vegetables.

Q Will all kinds of sand produce that?

A That I do not know. I know the sands we have in our reservoirs produce good vegetation. It usually wants a little manure with it, lime, compost or other.

Q Well when you said that slickens was a fertilizer you meant to say that slickens was better than the generality of your third class land up in El Dorado County? A I meant to say by slickens when I spoke of it as a fertilizer I spoke of muddy water — water that carried mud in what is called

8898

solution and vegetable matter, vegetable mould-dirty water.

Q Coming from the top of the ground?

A Coming from the mines, that discoloration from the mine washings give the water fertilizes the land

Q Up there? A Yes sir.

Q Will it fertilize the land down here?

A Well I do not know I never tried it

Q You mean to say now that when you add to your soil some of which is very near the bed rock, other of which is debris, a little top soil or washings from the mountain up there and particularly the natural washings from the mountains, that that adds to the fertility of the soil

8899

in the mountains there but I do not understand you to say that the rocks and other material found in the bowels of the earth down where the bottomless washings of the pit of the hydraulic mines are carried on constitute fertilizers, a thing which adds to the productive quality of agricultural land, do you?

A No, of course not, there is no fertilizing in rock, you cover the land all over with rocks and it is rocks and nothing will grow on it

Q But the thing which you say fertilizes the lands of El Dorado County is the surface washings of the soil of El Dorado County in the mountains?

8900

A yes sir.

Q And that comes from natural washings now, does it not?

A Well the fine sand, the washings from these mines - you take the Coon Hollow mine and let it wash down Weber Creek two miles, the coarser material is left back, all that will pass two miles down makes good soil that we value very highly and from which our vegetables are raised, and dams are constructed the Store Thomas Frasier in this year right in String Town Creek has made 15 acres of this very same soil and at an expense of not less than $50 an acre to make it by building walls and by cutting brush there are fifteen

8901

acres that he has made this year and it has cost him at least $50 an acre. It is all the washings from Cedar Hill and it is not to exceed two miles below the washings, below the mine, Cedar ravine

Q What did he make that land from? A He made it from tailings

Q Well I know but what was the foundation? A The foundation was bed rock as bare as a boulder.

Q And he thought it would improve the bedrock I suppose to put slickens on? A He did not think about it he cultivated it, had fine potatoes this last year and raised vegetables on it and he is now making the same kind of land about fifteen acres more.

<Here Recess is taken until tomorrow morning at 9.30 am>

8902

In the Superior Court of the State of California in and for the County of Sacramento.

The People of the State of California
-vs-
The Gold Run Ditch and Mining Company

Morning Session Friday Jan 6 1882

Transcript of Testimony Vol.

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Winfield J. Davis
Official Reporter

Testimony
-of-
George G Blanchard
Resumed

The Witness. I see by the reports in the papers that I am made to say one thousand million cubic yards. It is cubic feet that I intended.

Mr Belcher. Cubic yards of water or something else.

A. Cubic yards of water. It is 1700,000,000 cubic feet of storage in the store-house of the Eldorado Water and Deep Gravel Mining Company.

Mr. Hart. Judge, have you said that the destruction or covering up of this valley from the mountains was inevitable?

A. I do not recollect of such testimony.

Q. I mean have you said so — not in Court; outside of the Court have you not said to parties that the covering up

8404 of this valley from the wash-

ings of the mountains was inevitable.

Mr. Belcher. The objection would be to that that it is not matter in cross-examination whether he has or has not.

The Court. Ask the question.

A. I really do not know. I presume I have said this: that the wash from the old tailings, together with the early mining, the top soil that has been washed off, the erosions that are going on in consequence of the early mining, and the vast roads we have, from three to five miles of roads and trails in Eldorado County that wash out in every winter and wash gullies and wash down the side hills, and the slides and the rock that is constantly decomposing upon the old dumps, would send matter enough down here naturally, and raise the beds of these streams and of course in flood

8905 time would throw the water

over all of these lowlands. That is my opinion.

Mr Hart. Have not you said that it would cover this valley with slickens and debris?

A. Well, that I do not know. I am inclined to think that material would find its way, of course, in the channels.

Q. State what you said?

A. I do not recollect as to what I said.

Mr. Hart. Now, in making your estimate of the amount of material that will come down here in the future, of course you take into consideration also the decomposed rock to be decomposed in future years, now being put into the streams, don't you?

A. It is constantly running.

Q. Being taken from the mines and put into the streams — then this process of decomposition goes on?

A. No, it is not being put in.

8906 When I said the five per cent,

I meant to have said from the hydraulic mines now being worked in Eldorado County, the amount of refuse from those mines is very consider-able compared with those washings in Eldorado County.

Q. But what I want to get at, is this: the rock, you say, decomposes?

A. It does.

Q. When it is brought in contact with the air?

A. Some rocks do.

Q. I understood you to say a large portion of the rock?

A. Quite a large portion.

Q. Now in the mines?

A. Now laying upon the dump.

Q. And a large portion, you said yesterday, now in the mines, which they are washing is such as would decompose?

A. No sir, if I said that— well, those that are in the mines — as a matter of course those that are taken out,

8907 a great deal of it will decom-

-pose.
Q.- And that process of decomposition will go on and that material will eventually come down?
A.- A great deal of it, I am inclined to think.
Q.- The five per cent that you speak of is only that portion which comes down immediately, the light material?
A.- Yes sir; that is what I had reference to. From one of our hydraulic mines running, I think that not to exceed five per cent would pass 40 miles.
Q.- Is your cement in Eldorado County like the blue cement you see before you there?
A. Some of it.
Q.- That is all crushed, is it not and becomes sand?
A- Yes sir, it is.
Q- Water carries that?
A- Yes sir.
Q- You say there is only five
8908 per cent of that in your mines

up there?

A. That all passes. — I stated yesterday 65 stamps were running in the cement. That, of course, is crushed to pass a 20-screen, it might be 20. I can give you the length of the slots. It is a slot about a half an inch long, perhaps 3/4 and about 1/32 of an inch wide — not so wide as that.

Q — What proportion of the material from that kind of earth, that kind of material is composed of blue cement — what proportion of the blue cement and what proportion earth or gravel?

A. Of this here that I have before me <No. One?>

Q. Yes sir. A. Well sir, I never was asked an opinion and I did not give it. I would have to look at that.

Q. Well, I mean in Eldorado County, in the mines?

8909 A. A very small proportion

of that is of gravel and sand. That is mostly rock.
Q- Is not that 75 per cent at least? A. Rock?
Q. No, the other.
A. No sir, it is 60 per cent rock and 40 per cent of the other material.
Q. You think that is about what it is?
A. That is my judgment.
Q. Is that a fair average in the Eldorado mines?
A. No sir, there is more — well yes, I should say that would be a fair average; that is, the 60 per cent coarser material. Here is a small rock and here is a small one <referring to Exhibit No. One> and here are smaller rocks and one has come out of here, a smaller one here running from fine gravel up to a rock of this size and even larger, such as you see here <referring>: the interstices are
8910 filled with sand. That is the

natural wash of an old ancient river bed. That shows about how the sand percolates into the interstices of the rock and erosions of cement. I should say that was a good example.

Q- How deep is the blue cement in Eldorado County, in the mines that you speak of? A. The deepest channel of the main river, that is called by Geologists the ancient river that ran across there, is what we call blue gravel; the next bench above, 30 feet, is of a lighter color like that in there <referring.>

Q A yellowish color?

A. A yellowish color. It is only the lower channel that has the blue gravel.

Q. The part above this blue is not cement, is it?

A. It is all cemented and all run through the mill, but it is not such hard cement as this. This is a little

8411 harder than that we have there.

Q Well this cement that you speak of as having a yellowish color above the blue cement, is such as water will operate upon; is it not?

A No sir, they are running it through the mill. This is the second bench or third bench.

Q. How deep is the second bench? A. Well, on an average they excavate from three to five feet.

Q. Of the second bench?

A. Well, all of them benches about the same.

Q Each bench is about three to five feet in depth?

A yes sir; some perhaps six feet they may take.

Q. What is above this second bench? A. Above all?

Q. Above the second bench that you speak of?

A. Oh, well it is what they call lava.

Q. Lava? A yes sir.

Q. What is it, sand and gravel?

8412 A. It is white rock compara-

-tively, is not composed of one material.

Q. How deep is that?

A. About 110 feet.

Q. 110 feet through? A. Yes sir.

Q. Of slate rock? A. Yes sir.

Q. That is in Eldorado County?

A. Yes, at this point; this one place I speak of, the Prospect Flat Mine or Lion Mine.

Q. Is that the one in which you made your estimate of five percent?

A. Oh, no; the one that I was making the estimate of five per cent was the Excelcior Mine.

Q. Well, I am speaking of the Excelcior Mine; what is above the second bench of the Excelcior mine!

A. There is no second bench in that mine.

Q. What is there in that mine?

A. There is a wash gravel; there is gravel and lava. The lava in that mine is a

8913 darker color — a dark color

and that runs in streaks and layers through in the plot.

Q. There is no blue cement in that mine, in the Excelsior?

A. No sir not what they would call blue cement. They never have worked that mine with a mill. They worked that by hydraulic process.

Q. Is there any cement in that at all?

A. Yes sir.

Q. What is it?

A. Well, it is cement — there is but one kind of cement that we know of in the mountains there.

Q. Like this, is it? (referring.)

A. Somewhat like it.

Q. But it has never been worked, you say?

A. Well they throw it down and it ~~runs~~ lays there on the dump now in huge piles, larger than this house. It is thrown down. They do not wash it. It is hard. They

8914 worked it up and have got it

out of the way with derricks and one thing and another.
Q. The material from that mine is very heavy and hard?
A Yes sir.
Q. Much more so than this?
A About the same.
Q About the same as this blue cement that you see here?
A Yes sir.
Q. Is there any material that is softer than that blue cement?
A Yes sir.
Q. Where is that?
A. That lays below on the lava as it is called.
Q. How much is there of it?
A. In places there are 30 or 40 feet.
Q. And in other places?
A. Where the bed-rock pinches down, there is five or ten feet or twenty.
Q. What is that composed of, that softer material.
A. That is gravel.
Q. Any sand in it?
8415 A Yes sir.

Q. How much? A. Well, what I should call sand, I should say there was ten per cent.

Q. Ten per cent of that lower layer was sand?

A. It might be less, but that would be my judgment.

Q. How large is the gravel there?

A. The gravel is about the size of this; somewhat larger (referring) This big large piece here you find in the rocks as large as that and larger and so on down to small gravel.

Q This ten per cent of sand in the lower layer is what you estimate would go down from that mine?

A Yes sir; that is, what would wash.

Q. What is it? Is that the upper or lower layer of gravel?

A. The gravel is the lower layer.

Q. That is what I thought.

8916 Now, the sand that you

speak of fill the interstices between these rocks, does it not. A yes sir.
Q.-And you estimate that at ten per cent?
A. Well, laying in the mine, I should say that there was about ten per cent.
Q. And you estimate the amount of that sand, that would go away, to be five per cent of the whole amount of the material, in the mine?
A. That would pass down 40 miles, yes sir, there would not over that.
Q. The balance of the mine is composed of solid rock and very hard cement?
A yes sir.
Q. How much rock is there there in proportion to the amount of cement in that mine?
A. I should say one fourth of it or one fifth of it probably of this cement, perhaps more

Q. One fifth? A Yes.
Q. That 1/5 is crushed is it not?
A No.
Q. Is not crushed? A No.
Q. What is done with that cement? A It lies there; they move it with derricks to the side and wash it out, it is refuse matter
Q. In very large pieces?
A Yes. As large as they can move with the derrick.
Q How large is that?
A They can roll with the derrick a piece 6 feet square perhaps
Q. Is that about an average of the pieces that they take out there? A. Oh no. They are all sizes; some of them larger than that.
Q. And some of the smaller?
A Yes. In throwing them down some of the fall down and roll and slide and the do not touch them at all
Q. When you went there in 1850 what was the condition of the

8918

South Fork of the American River? That is what was its nature as to banks, bed and water? A. The water was low and the bar on the river was only on the South side where I worked. There was a stream of muddy water on the side where I worked. There were 200 or 300 men tailing onto it and of course that muddy the water. On the opposite side where the current ran down that of course was comparatively clear.

Q. What was the nature of the banks and bed?

A At places the banks were abrupt, almost perpendicular. At other places they were at an angle of 45 degrees, at an angle of 60 degrees, 25 degrees and so on

Q. Was the stream narrow or broad? A. The stream was in places quite narrow

8919

and other place quite broad
Q. Of what material were the banks composed mostly?
A The banks mostly were composed of soil and gravel. Where the old beds has been changed, of course it must be gravel and soil had collected upon it
Q What was the nature of the bed of the stream? pebbly? A Yes, rocky
Q Could you see the bedrock in the stream?
A At places where there were falls, great riffles you might you might possibly. But as a rule you could not see the bed-rock
Q. How do you calculate the impounding capacity of Silver Lake? A. Just as Daboll would, I suppose. The length of the lake being so much, the width being so much and the depth of the water being so much, multiply the length by the breadth and that by

8920

the depth, I suppose, probably it would give it.

Q You take the full capacity of the lake and call that its impounding capacity?

A No. I call the impounding capacity of a reservoir or lake, the amount of water that you can throw out of it from your gate. That which would remain in it all the time, that part, would not be utilized of course. For instance, if there is a natural lake there is that amount of water in it all the time. But when you raise the banks and raise the mouth, from the point of raise from where it was accustomed to flow from the surface of the water after the raise would be the impounding capacity I should say, not the entire water of the lake.

8921 Q How much water remained in Silver Lake before the dams were constructed?

A. How much water was in the lake before the dam was constructed?

Q. Yes, and remained in there during the winter and summer.

A. During the winter and summer? It would be impossible for me to give you anything more than an approximation of the amount for the reason that in one place in Silver Lake, according to my recollection now, it had a depth that I could not estimate because I do not know how deep it was. It was very deep. Of course around the edges of it I could state. I have fished over it repeatedly and hunted over it, and I could give a stranger a pretty accurate idea of it. If you want that sort of an estimate I will give it to you.

Q. Well, I will take your estimate?

A. The lake originally up to the Menchenary,

8922

Ranch, before the El Dorado Water and Deep Gravel Mining Company purchased it of him — I forget his name — was I should say, 2 miles long and perhaps 1½ miles wide. It might be longer; it might possibly be three miles. The depth would vary from the shores from nothing to 100 feet. The average as near as I can estimate the deep portion there, taking an average of the whole thing, might be 30 or 40 feet; I would say forty. Then you multiply that and you have got it.

Q Where did that lake receive its supply of water or does it receive its supply of water?

A. There is a creek at its head, running in, running constantly, and then it sheds all around. There is an immense water shed and an immense fall of snow. It receives the supply from

8923

the falls of snow and from the streams and ravines that run into it. I recollect one quite a stream at the head.

Q How large is that water shed? A How many acres or miles?

Q How many miles or acres. Estimate it as you want to?

A From the lake up to the pass over the first summit. (I have travelled it 5 or 6 times on foot), I should say way 4 or 5 miles - 5 or 6, and it would vary from 6 miles or more than that because if you go way up the outlet you have got an immense shed. I should say the shed was 15 miles long and 10 miles wide. That is my judgment

Q Now before there was any dam constructed there was there water running constantly from that Lake into the American River at all seasons of the year?

8924

A. No. I have crossed the outlet when very little running water could be seen. I do not know that I ever crossed it when there was not a little water running.

Q There was always some running? A. There was always some running, always. And you could go farther down on Alpine Creek or the outlet of Silver Lakes, and there you would see a good creek always.

Q The outlet of Silver Lake do you say? A Yes. A good stream. It has half as much as the South Fork of the American River where it empties into it.

Q. That was running at all times? A Yes, at all times

Q. Summer and winter? A Summer and winter. In winter it was a torrent.

Q. Is there any stream running from the Lake since

8925

this impounding process has been going on, equal to the outlet which you last spoke of? A. I do not understand you.

Q Is there any stream carrying the water from Silver Lake since the dam has been constructed, equal in volume to the outlet you last spoke of? A. The Company have dammed the foot of the lake and they let the water out of the lake as they want it, and it runs down Alpine Lake into the South Fork of the American River above the head of their Canal which is at Cedar Rock, to supply that Canal, and there is a stream constantly running there.

Q Is that stream equal in volume to the outlet?

A That is the outlet.

Q That is the same one that you spoke of a while ago?

A. Identically

8926 Q From which you said there

was always a good stream of water running?

A Always had been prior to the damming of it up, and there has been since

Q. Now is that in winter and summer equal in capacity to the stream that ran through that outlet before the construction of these dams? Equal in amount I mean instead of capacity, in volume of water?

A No, I should say not. They had dammed it up, and the waters were so raised in the lake, that, it being rock bound on the upper side, they have gone and cemented or repaired the leaking capacity of the lake itself or attempted to

Q So that the same amount of water that formerly came down through that outlet, does not come down now?

A No.

Q Either in winter or in summer

8927 A. No. They dammed it back

and held it back.

Q Where is the dam that holds back the water of Echo Lake constructed? A At what we call the head of Osgood Creek, or Echo Lake outlet, or the foot of the lake. The dam is across there

Q How high is that dam?

A About 6 feet or 7 feet now. They have surveyed a dam there of 75 feet high but I do not think they have at this moment a dam constructed of more than 6 or 7 feet

Q How does that raise the water of Echo Lake above its former level?

A Not much.

Q Well, how much?

A 2 or 3 feet

Q And that 2 or 3 feet is a constant regular rise that stands at a level without fluctuating up and down, is it not?

5928 A Yes. They have a gate

there to turn it off and run it down the South Fork. They ran a tunnel through the mountain from this side

8929

Q The lake stands at its present height Winter & Summer does it?

A Except in Summer when they have drained it off drained it down. They dammed it for the purpose of impounding the water, and after they impound it, when they need it in the Summer time they draw it off, and of course, if they take enough that will draw it all off down to the water level.

Q At what level do they confine their outlet through the dam, their place of escape for the water? A On the level of the old outlet, probably a little lower. It may be a little lower.

Q Does the water run down to that level in the Summer time?

A Yes.

8930

Q It runs to that level?

A A little lower

Q How do they do that, with a siphon?

A My recollection of the dam and the tunnel that they run through the mountain to discharge the water through from the lake is that it is a trifle lower than the mouth of Echo Lake outlet, the head of it at least?

Q They let this water just as they needed it for mining purposes?

A Yes

Q What is the capacity of the reservoirs - not reservoirs, but canals - and flumes through which the water is carried from Echo Lake to the several mines?

A The flume they have now at Echo Lake - I

8931 may be mistaken but

my recollection of it is such - is probably 2 feet on the bottom, perhaps four and two or three feet high. Then it runs through their tunnel, drops into the head waters of the South Fork, comes down to the dam of the canal at Cedar Rock and there they have a mouth that is an immense canal which I suppose at the head would carry I should judge about 800 miners inches of water

Q It gets most of that water from the river itself?

A Yes. Of course it gets all; all the water the canal does get at that point. It is just below the mouth of Alpine Creek or the mouth of Silver Lake.

Q How large a flume

8932 leads from Silver Lake?

A I do not know the size of that flume. I do not know the size of that ditch

Q From Echo Lake was there a constantly flowing outlet into the American river? A There never was a drop of the water of Echo Lake flowed into the American river until 1878

Q It is carried there by flumes? A It is carried there by this ditch Company who have run this tunnel through the mountain

Q Where did it formerly empty? A It formerly emptied into Little Truckee and run thence down Lake Valley into Tahoe in the State of Nevada running off through Big Truckee

Q Now this water that is sent through these

8933 several flumes is carried

Winter and Summer is it not? A I do not know whether the Company keep their headgates open during the Winter or not. I am inclined to think they do not. There certainly would be no use for it because they have abundance of water in the forks of the river to fill their Canal during the Winter Season but I have never been at the head gate in Winter or at their gate at Echo Lake in Winter. I judge it is shut; I do not know except from hearsay

Q Now if Silver Lake, the original natural outlet from Silver Lake during Summer and Winter carried more water than the flume from that Lake when it has been dammed,

8934

how can you say that there is any such thing as increasing the waters of the American river in Summer time by that?

A In the first place I do not say so and never have; and it is not a fact

Q It does not increase?

A No. I do not say there is more water running since the dam.

Q You say there is less? That is the way I put it?

A I do too.

Q Now if there is less water running through the dam how is it that the amount of water in the river is increased?

A It is increased only when they raise their gates, say from the middle of July. When the water in the river, the natural water slacks

8935 off, then they raise their

gates at Silver Lake and Echo Lake in order to increase the flow to supply their canal. But for these reservoirs that I have mentioned their canal would not contain during Summer time 700 inches of water. They could not get it. Probably 500, less than 500 in my opinion. But now, having impounded it, they can raise their Silver Lake gate and raise their Echo Lake gate and they can supply, during the latter part of August, September and October until up to the time of the early rains, a canal of water having a constant flow.

Q By taking this water in the river into their canal and using it for mining purposes in the ordinary way, is there not

8936

more loss by absorption than can be carried in the flume running from Silver Lake and Echo Lake? A No

Q There is not more?

A What do you mean by absorption?

Q I mean absorption and evaporation both?

Q You mean by absorption I suppose the absorbing by the ground where it runs over it?

Q By the ground and material by which it comes in contact, and also evaporation by the atmosphere?

A Yes. I should state the evaporation of the water that high up in the mountains and in the distance it has to run knowing the rocky nature of the bed of the stream, at from 28 to 30 per cent

8937 Q Is it not very warm in

Placerville and El Dorado County in the Summer time?

A Quite warm

Q What is it that you say determines the amount of evaporation?

A Heat I understand. Nothing will evaporate it but caloric, - heat

Q There is enough heat there to cause a considerable amount of evaporation is there not?

A Oh yes. 30 per cent I say. That is considerable

Q Now the absorption or percolation of the water would not be confined alone to the beds of the streams would it?

A Yes.

Q Is not the water first taken into a canal?

A It runs into a flume as I have stated right at the lake, But a short distance from its head

8938 You come into this tunnel.

the absorption going through that tunnel would not amount to anything because it is flumed from one end of it to the other. Then it opens out on this side of the mountain on the second summit, if you know how that is. We style them the first and second summits. Then it runs down the hill there for a mile or a mile and a half before it gets to the South fork of the river, then it mingles with the waters of the South fork of the Rivers and the waters of Red Lake. The Company have four or five other lakes that I have mentioned as feeders. But according to my present knowledge I do not think they have dammed any of their other reservoirs. Q. Are those other lakes artificial or natural lakes? A. Natural lakes. They are filled with fish. I have fished in them a good deal.

8939

Q- And they go through the Canal where to? A- They go through the canal and then down a little ravine for a mile and a half into the South Fork of the American River.

Q- Then they come to a dam?

A- Then it passes down the South Fork for twentyfive or thirty miles into the dam at Cedar Rock.

Q- Then it leaves the river again and goes into a canal?

A- That is the head of the canal- Cedar Rock. Then it finds its way to Placerville and below- Placerville.

Q- What kind of soil does that canal run through?

A- It runs through rock- there is a good deal of fluming on it around rock benches. They have several miles of flume.

Q- These flumes ordinarily leak somewhat?

A- They leak a little.

Q- That little aggregates to a

5940 very great deal before it gets

to the end? Do you know what amount that would be?

Q- What proportion of it would be lost by leakage?

A- Inconsiderable. They aim to keep their flumes tight but they will drop a little droppings. Sometimes it gets to be a little spurting but the ditch-agent repairs it immediately and his business is to keep it tight.

Q- When it gets to the end of the flume - or canal what is done with the water then?

A- The water runs down - the company turned in a portion of it onto the Weber divide - down the Weber Creek and running down to Canon into another canal that they have called the Weber Canal. That supplies the country that the other main canal would not supply - that is they drop it over each side of the two ridges. Then another par-

8941

tion of it runs on down to their big reservoir in Blakeley's ranch.
Q- There they store it again?
A- Yes.
Q- What is that reservoir composed of?
A- That reservoir is composed of soil. I think the bottom of it is masonry. It is a very gigantic work and is very expensive.
Q- Do not they store some of it as the go along in small reservoirs?
A- No sir.
Q- Constructed for that purpose?
A- No sir. The Blakeley reservoir is the first storage point they have.
Q- Have they any other reservoirs in which they store it?
A- Yes. They have a reservoir on Coon Hill.
Q- Composed of soil?
A- Yes; One, yes.
8942 Q- Now in addition to the

absorption and evaporation that goes on— they they put it in boxes and they turn it against a bank do they not?
A- Yes.
Q- Is not the absorption very considerably there?
A- Well the absorption is some, but the main absorption is running down the rivers. The main absorption— when the body gets into the Canal— comes into the head of the Canal the absorption is not so great. In the Summer time the rocks get hot and the bed of the river is full of them. I am speaking of evaporation now, bye the bye. The absorption from an old ditch is very small because they are puddled. When a ditch is new the absorption is very great. It takes a long time to get a head of water through a new ditch twenty five miles. But they have their puddlers and a ditch man

8943

knows exactly what to do. This ditch is not in prime order until it is six months or nine months old — perhaps older and it is growing better all the time.

Q- In the mean time a very great deal of water is lost? A- Yes. In the mean time while they are puddling it and getting it in a condition to carry the water there is a good deal of it lost.

Q- Now starting a volume of water from Echo Lake and running it down to the reservoir at Coon Hill would there not be a noticeable and appreciable diminution of the water? A- Yes.

Q- You could notice it from looking at it? A- Yes.

Q- That would be the result — A (Intg) That is you mean to go to the head and start a head through the flume and then ride down to Coon Hill before the water gets down

8944

and look at it when it comes down to Coon Hill, you can see that it is less.
Q- You can see that it is less?
A- Yes I can see that it is less.
Q- In speaking of these reservoirs which you said were constructed for mining purposes? Do you include the natural lakes or do you have reference simply to the damming up of the lakes and natural water-courses?
A- The damming of them up.
Q- When you said the reservoirs were constructed for mining purposes you mean that those natural water courses were dammed for that purpose?
A- I do.
Q- How do you know the amount of gold production in El Dorado County?
A- Firstly I did not say I knew.
Q- Well you do not know?
A- Your hypothesis is wrong. I did not say I knew.
8945 Q- You do not know then, do you?

A- Do not know how much?

Q- Yes? A- I can only approximate it.

I could not tell you of course I can only give you the grounds of my opinion and then I can tell you how much in my judgement there was.

Q- First state whether or not you know the amount of gold production of El Dorado County? That is susceptible of a categorical answer?

A- No Sir. I do not know the amount.

Q- Is it not a fact that your statement of the amount of gold production is based very largely not upon knowledge but upon hearsay?

A- It is based upon hearsay and upon practical knowledge - what I know myself. I know what I have mined out and I know what the companies that I have been concerned
8946 with since 1850 have taken

out. I know what my neighbors have taken out — neighboring claims and I know what a great many are taking out constantly. For instance I can name — I have in my mind now at this time three companies

Q- Name those companies?

A- The Church Union Company

Q- How do you know what the Church Union Company has taken out?

A- I know from the books of the Company — I know from seeing their semi-monthly "clean ups" — I have been present when they cleaned up and I know from seeing the actual weight of the bullion. I used to own half the mine myself, and I know generally what it will pay — I know what the mine will pay

Q- Could you estimate the amount that it has paid by the amount it will pay?

A- I take the

8987

amount that it has paid
They have got to the depth of
800 or 900 feet and I own
the adjoining claim now
I know the size of the mine
and I know the size of the
lead. I have known the
mine ever since it was
started in 1851 up till now
and I have been interested
and concerned in it from
time to time.

Q- What are the others of
those three mines- name
another one of those three
mines

A- The Grand Victory

Q- Have you any ownership
in that?

A- Yes

8948

Q Name another?
A And what was called the Old Pacific Mine is now owned by a Company - I used to have two Shares in that Company and I Know what my dividends were and I have been down in the mine. I have seen the rock from 1854 till now while it has been worked and I have been interested in it.
Q Name one more?
A The Volcanoville mine.
Q Did you ever have any ownership in that?
A Yes. I built a mill on it and run it.
Q And run the mine?
A Yes.
Q Name another?
A Well the Pocahontas mine.
Q Did you ever own anything in that?
A Yes I owned the mill once

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Q Did you work the mill
A Yes I did.
Q And actually saw what was taken out of the mine?
A Yes. It was mine.
Q It was yours?
A Yes.
Q How many of the mines in proportion — how many of the 600 mines that you have mentioned have you held ownership in?
A Let me see. I owned a mine on Live Oak bar. Necessarilly in any enumeration I might make I must forget some because I have stated that there was 200 Stamps and when I came to reckon it up I see there are 485. You see that I am below the mark all the time because my recollection does not extend over all of it
Q Give a general estimate of the proportion of the number of mines in the County

that you have owned?
A I will name the mines but I presume I will forget some of them.
Q It is not necessary to tell all
A I could take my pencil and figure it up by myself.
Q It is not necessary. I are trying to save time?
A Well in the neighborhood of about ten.
Q Well at the uttermost it would not be more than twenty that you have owned The number would not be greater than 20?
A No I should suppose not
Q How do you know the amount of gold that was taken out of the balance of the 600 mines that you mentioned yesterday?
A I can judge pretty well from those that I have been interested in and
8957 from my contact with the

miners as to what them mines have paid, I have been interested in litigation since 1855 very largely among miners where the proceeds of these mines necessarily came in evidence and from my acquaintance with the agents of Adams & Company Gregory & Company Wells Fargo & Company and the different Gold dust buyers throughout the County & Conversations with them & seeing them on Saturday night for instance and on Sundays for instance when I would go with my own dust for sale and there would be a Concourse of miners with there bags exchanging there dust — from different localities I have talked with the different miners in relation to it and I have formed some estimates of what have been taken out of Certain

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ravines — for instance what had been taken out of Hangtown Creek and what Old Weaverville produced and what old Ringgold produced. And what Cold Springs produced and what Coloma produced and what Georgetown has produced and Canyon Creek, which was probably one of the richest localities — Canyon Creek — and Otter Creek and Jones Hill and Bottle Hill and Mameluke Hill and having a general knowledge of the county having lived there since 1850 and knowing everybody and everybodies business you might say.

Q Now is it not a fact that your opinion or at least your knowledge as to the production of all the mines or nearly all the mines except those in which you have been

interested is founded upon hearsay?
A It is founded upon hearsay exclusively except as I tell you as I have seen.
Q You could not make any statement of one hundred millions or one million that had been taken from any portion of the mines nor any estimate at all excepting as you have based it upon what people have said to you in the County?
A No sir. I do not believe it would run over a million or so except what would be based upon my comparison and judgement.
Q And what people have said to you about these mines?
A Yes you might make comparisons
Q So that your statement of the gross amount is
8904 founded upon hearsay is

it not?

A No.

Q It is not founded upon hearsay?

A No sir.

Q Do you not know that you cannot know a fact in relation to the amount that has been taken from a mine without it is either upon seeing the thing or hearing it stated

A So far as the exact amount is concerned that is all right. But if I threw into a pot of 100 men a thousand dollars— if I contribute a 1000 dollars I know there is a thousand dollars in that pot and if the other men come in and I see what ten of them have contributed I know what is in the pot aside from my own and I can form some judgement as to what is in the pot

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I can tell you up to a certain amount what is there and I can give you my judgement based upon the facts and I can give you my reasons why I think it would come up to another certain amount. Of course I could not swear as to a certain amount.

Q Outside of the amount that has come from your own mining have you ever seen a million dollars of gold dust in Eldorado County that you knew came from the mines of that County?

A Yes.

Q How do you know first that it came from the mines in that County?

A I knew by the men that I saw have it I knew where they were mining.

Q You infer you mean

A They satisfy me, for

8956 instance a miner living on

Chilie ravine - I will take Aldersons - Thomas Alderson he is an Extensive miner, he has mined on Coon Hill since 1862 and I know the amount of gold dust he sells and I could very safely say that he took it out of Coon Hill.

Q Could you swear that he took it out of Coon Hill?

A I have known him all the time and I have seen him almost daily and I have had a great deal of business with him and all that kind of thing. he is a man that does not travel and dont go around much and he does not own Claims any wheres else, If you would ask me how I knew I could only give you my best Judgement.

Q You could give your inference only from what you saw?

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A It would be entirely satisfactory to me or to any man listening to me who is governed by a good sound judgement.
Q You have been a district Judge ?
A No sir.
Q You are a lawyer?
A Yes.
Q Do you not know that it is impropper for a witness to state inferences and that the only propper thing for you to do is to state the facts that you know yourself and to let the Judge draw the inference
Mr Belcher Objection.
The Witness (Interrupting) I desire to answer the question I always prefer a witness shall state the facts and if he is asked by Counsel for his inferences from those facts, for him to give his inferences And it is for the Court to say whether his

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inferences are naturally ded-
ucable from the facts stated
I state the facts and you
ask me for my inferences.
If my inference is incorrect
it has no weight and I
give it to you simply
because I have an inference
and was asked to give it
Q The fact is your inference
is of no account whether
correct or incorrect because
the Judge must eventually
draw his own inferences?
A If you ask me for my
inferences I will give them
Q I do not ask you for
them I simply want to
know whether or not your
opinion is founded on what
people told you or whether
it is founded upon the
actual knowledge of the
facts upon which you
base it?
A I have already very
carefully gone over the
8959 whole ground and have

given you the facts upon which I based my inference as near as I can. I could by a little reflection give you more facts of Course because a person does not recollect all of them I Could give you more of the facts upon which I based the inference I gave you and to ask me now whether it is not guess work would be to go over the whole ground again.

Q Your statement of Amounts however necessarily depends largely upon what people have told you and what you have read and what you have seen in books of the Companies?

A Largely Yes

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Q How do you make an estimate of the amount remaining to be mined?

A. Formerly the mining might be compared to the washing up simply of nature sluices, where nature had done the mining and the miner came along and simply cleaned up. Those cleanings up have all been accomplished and now the miner, has to do the work, or a great portion of the work that the Almighty did previously. The miner is in these deep diggings all covered up and discovering new channels and tracing out the old channels to their extent, and the recent washings since the old channels have been covered up in the ravine mining, and the miners now in El Dorado County are mostly engaged in these old diggings, there are some seam diggings and some of them worked by

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hydraulic. Their attention was not called to them in an early day, they did not know that there was such a thing as a seam digging or what we call porphyry diggings although there are leads in El Dorado where nearly every month they take out $80000 or $100000 that are taken out of seam digging and porphyry diggings and all that sort of thing. The mines now are deep diggings in these old ancient river channels. They are mined at greater expense and a slower process, they can not be mined out so quick.

Q Are you estimating now the length of time it will take to do the mining, or the amount of gold in the mine?

A I am giving you my reasons in I was stating to you how I came to my conclusion of the amount of gold remaining

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Now for instance they are constantly discovering new channels; although a channel has been discovered and worked and shafts sunk on it at least — running above Pleasant Valley there has been on that main channel 3 or 4 branches discovered, showing evidently that the streams anciently run in a different direction from what they run now and that those streams had ravines and tributaries just the same as our streams now have ravines and tributaries and canyons running into them, and those canyons are constantly being discovered, some of them remain under ground 120 feet. The one just below Pleasant Valley is 120 feet from the surface and plainly to be seen. So far as the discoveries already made

8963 there are 2 branches to that

Stream, and the Coon Hollow mine or the Excelsior mine now owned by the El Dorado Water and Deep Gravel Mining Company is considered to be but one branch of the old ancient river of which the Lyon mine is the old main bed, the same as the Sacramento River here is the main trunk of the 3 Forks and the channel running across at Newtown is the same way. And judging from the extent of these old beds, and their richness wherever they have been got in to, and then the quartz mines that are now being worked and discovered constantly I judge that not 1/4 of the gold has been taken out

Q That is a guess though is it not? A I am giving you the reasons why I state it.

8964 Q I ask you if that is not

a guess?
A What do you mean by a guess?
Q. I mean a guess that has no reasonable foundation?
A If is not a guess then
Q It is not a guess.
A No sir
Q. Can you say that the deposits of gold in the Earth have any considerable regularity or any amount of regularity?
A They have not amount of regularity
Q. Can you say that because there is gold in one place in those mountains there is necessarily gold within 2 miles of that place?
A I can not. I will answer it in this way. Give me any ravine in Eldorado County, take Weber Creek or I will take Hangtown Creek. There are places on Hangtown Creek, that have paid very richly, other places that did not pay so well

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other places that would not pay more than 5 or 6 dollars a day up to $100 a day to a man and all that sort of thing, that was owing to the flow of water and the surface of the country, the irregularity of the surface of the country as forming riffles or catchments for the gold itself. In estimating these other deposits that still remain in these old river channels you have to bring your thoughts to bear as to what you have seen in relation to the catchment of gold the different kinds of pay and then what experience has absolutely proved in these old channels, as with the Robinson mine or the Lyon mine where they have worked 1000 feet in length up and down the river channel, and they can tell in that mine from the contour of the bedrock, from the irregularity

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or regularity of surface whether it will be rich or not, understanding all the time how nature deposits gold

2. But the difficulty about understanding that is just as the difficulty now is about determining the depth of a stream, after it has been filled up, particularly a mountain stream. There is not regularity in its bed, there is no regularity in its current and there is not regularity in its pockets that may receive gold and is not that equally true of these things that you call ancient river channels. Now that being true comes it not be true also that any undertaking to estimate the amount of gold remaining in the mountains would necessarily be a matter of speculation and to some extent of wild speculation without any reasonable degree of

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certainty about it?

A To a certain extent of course it is speculation, based upon experience, and then upon estimates so far as you can see. It is just like a man estimating the value of his quartz mine, if he has a lead where he has prospected we will say 400 feet in length. He has sunk on there 10 shafts, he knows that he has got a lead here at this shaft at one end, and 400 feet off he knows that he has got another shaft, he has gone 500 feet deep, he knows that at those two points that lead goes down 500 feet. Now at the intermediate space he sinks 10 other shafts and he finds it is regular and he sinks those 500 feet deep, he crushes the quartz and he estimates the amount of tons there is in these 500 feet, and he will tell you how

much it will pay, if you call that a guess. It is what I call an educated guess; it is a guess that satisfies a reasonable man of the value of that mine.

Q. I want to ask you this: In the deposits in streams that we have at this time, it sometimes becomes necessary to construct dams. Now is it not true that there is no scientist in this country or elsewhere who can make any reasonable guess without boring into the ground as to the depth in which he will have to go in any place before he strikes a proper place in which to construct a dam, the hard bottom?

A No sir.

Q. That is not true?

A No, it would not be for me. If they will take me on and ask me where to build a dam, I can tell them pretty near how deep

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the gravel is
Q You can? A Yes sir
Q We ought to have known of that when we were constructing the Insane Asylum dam down here that has cost us a heap of money
A. The fact is this. You go on to these rivers and if you find the water still, and if you find it comparatively flat, you should know right off there is a hole there and that the gravel is deep. I mined three years ago in the South Fork of the American River, above Chilly Bar. I did not hold the plow or drive, but I was there and we took out the gravel of that hole 25 feet deep just below some narrow within sight of Leonard Greggs bridge, and any man that had any experience or any judgment, that could put this and that together worth a cent, could

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see that there was a hole and a great depth of gravel, just how deep I could not tell as a matter of course, but when you go on to a riffle in a river or anywhere else where water is riffling down you may know that the gravel is not so deep there as it is where it is still — you know it.

Q The riffle there may have been formed, by the deposit of gravel in it, might it not?

A Well, if the gravel was recently deposited and there had been no floods to level it down or something like that it might, and there might be a depth of gravel where there is a riffle, that is so, I have seen it

Q Speaking of scientists, you said yesterday you do not believe that any one can tell how much water in a river can carry a certain

8971 character of material in

suspension. Assuming as the basis of my judgment that these ancient river channels, or like the river channels that now exist, like the American River, it would be a very fair assumption, how can you or any other man tell at what points, and under what circumstances, the water would be of that velocity which would carry and deposit in a certain place, gold and gold bearing rocks — how can you make that estimate. Why in other words, can you make that estimate any better in relation to the ancient river channels than you can in reference to the modern river channels?

A Well, if you work your ancient river channels and work your modern river channels as a matter of course you have got a practical experience and

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if you can put this and that together you can compare the two

Q. Take for instance this; we know that according to the testimony of the defense in this case that there is a very large deposit of gravel at Fords Bridge

A. At the old Fords Bar.

Q. Yes sir, and a considerable deposit between Pickerings Bar and Rices bridge but no considerable deposit at any other point in the North Fork of the American River — that is the testimony, that is my understanding of the testimony but taking that as a basis of judgment how could you say if this river were covered up entirely — how could you make an estimate from an investigation at any one point, for instance of Fords Bar, how could you make any estimate of the amount of deposit in any other portion of that

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stream that had been made by mining containing the material the gold bearing rock that has been sent it.

A I can only answer in this way, that practical experience shows that when you dump from the workings of a large hydraulic mine into a large stream, that the floods of water come down and will level them off. Of course it will roll rocks at first if they happen to stand light up on the banks where they are level it will throw rocks of that size (showing) they will keep going the smaller and the bigger rock and the earth keeps going on until nature turns the rock over or whirls it around or gets it in such situation that the water no longer has an effect upon it and when it gets in that position it no longer moves until the fresh moves it or until

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Some dirt comes down, and moves it, because nature puts it in position and there it remains and then in filtrating through the interstices of the rocks comes the sand and smaller gravel that makes it still harder, it is a pavement and it will go down and you can see at the dam at the Excelsior Mine on Weber Creek where in heavy flood times there are 5000 inches of water running and when that water is running and when these rocks have got in there naturally —

Q (Intg) I do not think you are answering the question I asked you

A. What I was going to say is this: That you must know where your drink is. You may not tell exactly in relation to the stream unless you know some other facts. But seeing the fact of this.

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mining and dumping into Weber Creek from their mine and then going up, the piles of tailings that have remained there

Q (Intg) That is in relation to another matter; I say basing your judgment upon what you saw as to the operation of water now in these rivers upon deposits or upon tailings that are dumped into those rivers, is not that a demonstration that you can not make an estimate as to where material of a certain kind is deposited in the ancient river?

A I can not answer that. I really do not understand your question.

Q I ask you if the operation of water in the present rivers upon tailings that are put in there does not demonstrate that you can not make a reasonable calculation as to the operation of the water

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upon tailings of the same kind or material of the same kind in ancient rivers?

Mr. Dibble That is that rivers change.

Mr. Hart Now, not that rivers change, but that the inequalities in the breadth of the river, the width of the river and the current in different places upon the material there in the stream render it utterly impossible for you to make an average of the amount of deposit of a certain kind throughout the length and breadth of that river?

A. I never have studied that subject, I never have compared these ancient river beds with the present river beds, I have only formed a general opinion by going into the mines and conversing with men whose minds do run on science in relation to the formation of these ancient

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streams. I have been with Professor Silliman when that very thing was under discussion at Placerville, he visited this same ancient river bed that I am now speaking of, and I cross examined him once for a day and a half or two days upon it and I got a good many ideas from him in relation to it and then I have been in mining a good deal up in that section, but I never really have compared as your question would imply I should do, before I could answer a question of that kind

2. Are you at this time then reflecting your individual judgment upon the matter, or partially the views of this gentleman you have just spoken of? A They are mine and nobody elses. I might gather them you know from what I see, and probably from what I hear

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and from the reasoning of others, but when I finally adopt the matter it is mine.

Q Have you ever put these views of yours into practical operation in mining. The determination of the amount of gold in the Earth?

A I do not really now at this moment see how I could make any particular application of an estimate of the amount of gold that there could be in El Dorado County.

Q You could not estimate the amount of gold that there would be in El Dorado County, any better than you could estimate the amount of gold that there would be in any mountain in El Dorado County, could you? A Yes sir.

Q You have a larger field to guess over?

A. Oh, if you would ask me what amount of gold there is in the hill, considering

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Placerville on the north I would give you an answer and then if you asked me what Hangtown Hill is worth, I will give you another. One is a rock formation and the other a gravel. That mountain, Hangtown Hill, running clear to Sportsman Hall is a gravel bed and it has been prospected all the way to Sportsman Hall and Coon Hollow and away below.

Q Prospected by whom, not by you. You have not prospected it have you? A No, not all the way but I can name the owners of the claims and I have been in them and have had litigation on 4 or 5 of them.

Q If you or any other man in the world were able to tell the amount of gold in the earth at any particular locality you would be able to get rich in a month, would'nt you? As rich as you wanted? A No sir

89 80 Q Not all the money you wanted

A No sir.

Q. Why is it that miners if they can estimate the amount of gold in a mountain, or in the earth, and make anything like a decent estimate, why is it that mining so often fails, that speculation is so wild?

A Well, sometimes it is because their mines give out. They will take a mine for instance, and they will work along and work along and their mines give out and of course, they do not know anything about it, they sell out. I have in my mind two instances now, one where a man sold a claim for $80.000 and was the worst beat man in the world, the Company paid for it in some 4 or 5 months out of the same ground and the claim is now valued at a million and a half and he supposed he was getting a fine bargain

8981

Q At any rate if I understand you rightly, there is no regularity about the deposit of gold in the earth?

A There is no regularity as I understand it except quartz mines. There is a regularity about quartz mines.

Q Well some quartz mines pay very much more than other quartz mines?

A Oh yes one mine as compared with another mine and all that but there are mines where they can calculate on $13 a ton or $13.50 and they can make their calculation on Saturday night what they will take out the next Saturday and they won't fall short much.

Q That is when they are working a certain material and know what that material is, it is in sight?

8982 A Yes sir. It is so with

a quartz mine. It is so with the Corn Hollow

Q That material then is in sight? A yes sir

Q they know what they are working? A yes - oh no they cannot see at all except they can see the face of their stope

Q They make their estimate that that stone of that character, of the quartz of that character is at least so far, so that they can make some estimate?

A Exactly, the miner says: we have run our drift 100 feet and at the end of this 100 feet it looks just as it does here and the stope extends so far up and we can work that out and they can calculate to the payment of a bank note how much they will take out

8983 Q They would know to

a cent? A I did not say to a cent. I say to the payment of a bank note.

Q How much of a bank note? A Just what I meant by the comparison was: if a man had a certain amount of money to pay at the end of a month and had a mine of that kind and was working it he could determine that he could pay that note with the amount of money that he would take out of his mine with a great deal of certainty

Q If the note was small enough? A If the note was small enough. He would have to calculate that according to what he knows it would pay There is a gentleman before me that can make that calculation on the mines

5984

that he is working now and has done it repeatedly

Q That would be owing entirely to whether he paid off his men that did the work during the week in most mines?

A The miners are generally pretty good pay

Q I guess so, but they might reserve that for a week in order to pay their note? A So far as my experience goes they push a good deal and there may be a good deal of the lion about them, but at the same time they pay

Q I did not mean to insinuate that they did not but they might have to levy an assessment in order to make the payment?

A It takes a good deal of backbone to build a canal to run to a mines

8985

and pay out a million dollars, or to pay out two or three hundred thousand dollars to open a mine—it is not everybody that can do it or will do it, but there are men in this State that do do it and can get along and a good many of them.

—— " ——

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Testimony of Manley C. Lawton

Called for deft. Sworn.

Mr Belcher. Q Where is your residence? A San Francisco

Q What is your occupation?

A Civil Engineer

Q. Have you professionally had anything to do with the reclamation of Swamp and overflowed lands?

A I have sir

Q Or to the lands?

A yes.

Q Where? A Union Island, Staten Island and the Jersey tract

Q Where is that?

A That is two miles above Antioch on the Eastern side of the San Joaquin immediately opposite Sherman Island between False River and Iron House Slough or Dutch Slough.

8987

Q How long were you connected with the works upon these tracts of land?

A About 6 years altogether.

Q How large is Union Island?

A About 41 000 acres

Q How large is Staten Island?

A It contains about 9 000 acres

Q And the Jersey tract?

A About 3900 acres I think; 3800 or 3900 I think.

Q What was the condition in which you found Union Island, I mean now as to the island itself if any portion of it was solid ground or any portion of was not?

A Perhaps one half of the area, the upper portion is terra firma and runs from nothing to a depth of 12 or 15 feet of peat at the lower end, that is the lower end of the cross levee of the Company's land. It is very near

8988

the boundary

Q And what do you say of Staten Island?

A There was about 100 acres, perhaps more than that of terra firma at the upper end of Staten Island adjoining the main island a branch of the Mokelumne at the main island

Q How did the borders of these islands compare with the centre and the peaty portion?

A There is a narrow deposit of sediment generally upon the immediate river bank

Q On the immediate river bank? A Yes sir, about 3 feet thick, say an average of 3 feet thick at the water's edge and running back to nothing, say 100 feet or perhaps 150

Q If there are sloughs running through the island

8989

originally, how with respect to those other sloughs?

A The banks of the sloughs were similar, had similar deposits of sediment

Q Have you had acquaintance also with other islands and districts that were that were reclaimed or estimated to be reclaimed?

A I have visited other islands

Q In the same neighborhood? A yes sir.

Q These islands are islands in the neck between the rivers, the San Joaquin and the Sacramento are they ~~are~~ not? A yes sir. There are other reclamation districts which are not islands

Q Other reclamation districts? A The Jersey tract is not an island neither is the Webb

tract an island; they are peat lands for all that

Q In the reclamation of these islands what did you do, or of these lands rather, because the Jersey tract I understand you is not an island? A We built levees, different styles of levees, in different localities

Q Well what style of levee first? A Beginning at the upper end on terra firma we built a scraper levee

Q That was the first one? A That was the first one. The ground was high and dry and the very best material ~~the~~ and could be worked by scrapers. In the peat we built a different style of levee. We built some heavy peat levees fifty

8991 feet wide at the base

and 20 feet wide at the top and an average of 8 feet high and then again we built some retaining wall levee, retaining walls were built 5 feet high and 25 feet apart and the peat being cut out in the centre and sand being pumped into the river by a sand pump

Q. Was this form of retaining walls and filling in with sand was that the first or was that the second attempt?

A That was simultaneous with the other

Q It was simultaneous with the other? A yes sir

Q What was the result attending the construction of the peat levees?

A Well the result has been that they failed

Q Why A Well in the

8992 first place they had no

stability. The specific gravity of peat is less than half that of water; they decay very rapidly and they are liable to be burnt up — combusted.

Q Suppose a levee is built of peat, and of such dimensions as you have named: 50 feet at the base and 20 feet at the top and of a depth sufficient to overtop the floods that rise above them — let that stand for two years — what will then be its condition? A I do not understand you sir

Q I say: suppose that you have built a levee of peat material 50 feet wide at the base as you said and with a depth of 8 feet and 20 feet wide at the top; now what would be the condition of that levee after it

8993 has stood for two years.

A Well it probably would not be more than half of the height and would be full of great cracks and holes.

Q The peat is vegetable is it? A It appears to be vegetable growth, fibrous growth.

Mr Cadwalader I will admit that

Mr Belcher Q You say it is liable to be burnt and that it is lighter than the water? A I do

Q What effect would the winds have upon it? You say first it shrinks away to about half the height? A Yes sir as fast as the water drains out of it, it shrinks it and if there is more weight added to it, if it is put under a weight of superincumbent levee it is like a sponge, it settles immediately and then it decays

8994

rapidly, there is nothing left of it.

Q Has any leveeing of that kinds proved successful? A None that I have known of

Q What has been the result attending it?

A Well the result has been that the levees are broken and the islands flooded

Q I think you have given sufficiently the reason why those levees will not or cannot be made to stand, what effect has the leveeing of those islands above the junction of the Sacramento and San Joaquin had upon the rivers themselves and their carrying capacity?

A Well I think they have had very little effect upon the river so far. There has not been sufficient levee built yet to alter the rivers.

8995

Q You mean by that that there has not been sufficient leveeing to check the water in its overflow of these lands?

A No sir

Q Do you know about Grand Island and Sherman Island? A I visited them sir

Q Is there any portion of these islands where the levees have withstood the water? A They have all given way sooner or later

Q So long as they did stand what effect did they have? A Well the effect would be to temporarily drain the land as long as they stood

Q What is the effect of cultivation upon this peat land? A Well the effect is to depress it

Q How much per year, or in a series of years?

5996 A Well I would not undertake

to say exactly how much, the peat is very spongy and will decay rapidly; when they plough up a furrow of 6 inches and turn it over and it is harrowed up, in a season or two that has all decayed and makes perhaps one tenth of the original bulk. Each year they plough still deeper and bring up new portions of the peat which will in their turn become decomposed and the centre would subside until there would be mould enough accumulate to farm with without the peat.

Q How was the surface of these islands with respect to water before reclamation was attempted?

A Generally the tide flowed over them each day

Q And how were they
8997 with respect to any rises in

the rivers, floods?

A Then they were submerged altogether

Q What effect does the deposition of sediment have upon these lands?

A Well in my experience the deposition has been so small that it has amounted to nothing, the results from them

Q Well what is the effect of sediment with respect to soil where sediment is found is the sediment soil best or is the peat soil best? A I would not undertake to say. I simply know that the farmers prefer the sediment for certain crops, at least that for orchard and gardening it is superior to peat. All of these orchards on Grand Island are on sediment and the fine gardens as well

8998 as along the banks of

the Sacramento and on the other Islands, Andrus Island

Q What has been the result in respect to the cultivation of grain or cereal crops upon peat land? A I believe it has not been satisfactory sir

Q Why not?

A Well there seems to be conditions that are favorable to rust for one thing and then the peat is a very rich soil and the weeds grow very rank, and often take the crops and outgrow the grain.

Q Is there anything dependent upon the amount of mineral in the soil?

A Well I should say there was. I should say the peat did not contain earthy matter enough to produce grain. That is my opinion

8999 Q When you say "earthy

matter" what do you mean?

A Well I mean phosphates of lime and magnesia etc., silica anything of an earthly nature, of a mineral nature. The peat contains little or none of them. Take a cubic foot of peat and wash it in clean water and it will scarcely color the water.

Q Have any of the tule lands at the junction of these rivers or any tule lands with which you are acquainted been successfully reclaimed?

A None that I know of

Cross Examination
of
Manley C. Lawton

Mr Cadwalader. Q Where is Union Island?

9000 A Union Island is

situated between what is known as Middle River and Old River in San Joaquin County, I believe it is. I think Middle River is a branch of the San Joaquin and Old River is a branch of Middle River. Union Island lies between the two

Q How far from Stockton is it? A I think about 10 or 12 miles sir, it lies just opposite Roberts' Island

Q It is about 50 miles from the mouth of the San Joaquin?

A I do not know the distance to the mouth of the San Joaquin, I could not say

Q Well 10 or 12 miles from Stockton is it?

A I should think it was 10 miles at least in a straight line

9001

Q You say that they had no sediment there to amount to anything?

A On Union Island?

Q yes sir A I say that the whole upper end of the island is terra firma, about one half of the area

Q I understood you to say that you had no deposit there?

A On Union Island no. I believe I explained that the first levees on about one half of the area of Union Island where ~~the~~ we built a scraper levee was terra firma, we could not build a scraper levee on peat

Q What was the condition of the island when you went there? A yes sir It was terra firma, as much so as any adobe land is around there.

9002 Q Peat is a deposit is it not? A I do not think

it is sir. I think it is a growth. I think that peat is a growth.

Q well it is a growth on something is it not?

A A vegetable growth it appears to be, I do not know what it is. It appears to be a mass of fibres. They are not rule roots, neither are they grass roots. They appear to possess vitality; you cut a portion off from this peat and it turns black and decays immediately, but as long as it remains in its bed it does not act in that way at all. It is a mass of fibres and is unlike anything else I have seen.

Q where is the Jersey tract? A The Jersey tract I think

9003

is about 8 miles above Antioch opposite Sherman Island. It lies between two streams known as the Dutch slough and False River and joins the main land

Q Antioch is at the mouth of the San Joaquin? A It is near the mouth, a little above the mouth, I think

Q It is a little above the mouth? A yes sir

Q So this Jersey tract is entirely within the San Joaquin?
A The San Joaquin forms one side of the Jersey tract.

9004

Q Where is Staten Island?
A Staten Island is in the Mokulmne River, formed by two Forks of the Mokulmne River - the north and South Forks
Q None of those Islands are in the Sacramento are they? Staten Island is not in the Sacramento
A No it is not. It is in the Mokulmne.
Q It lies between the west and east forks of the Mokulmne?
A Yes, the east and west forks or north and South Forks, as termed sometimes
Q When did you go to Union Island?
A In 76.
Q What did you go there for
A As Engineer of the reclimation
Q Who for?
A For Gen Thomas H Williams

Q You were his engineer there were you?
A I was at that time.
Q Were you also his Engineer at Roberts Island?
A I was not.
Q Is Union Island the Island of which General Williams owns one half and Gen Naglee of San Jose the other?
A Gen Naglee owned a portion of the Pescadero Rancho at the upper end of the Island
Q Union Island has been a bone of contention between Gen Naglee and General Williams has it not?
A I believe they have been involved in litigation
Q Who owns the upper end of the Island?
A I suppose Gen Naglee.
Q And Gen Williams owns the lower end?
A Yes. Or the Tide Land
9006 Reclimation Company

Q Gen Naglee owns what you call the Terra firma?
A Yes. A portion of it.
Q Gen Williams owns what you call the Bog land
A Gen Williams owns considerable of the other too.
Q You have been engaged for years and years there have you not, trying to make the terra firma stand the expense of reclaiming the bog land?
A Not that I am aware of
Q Had not Gen Naglee cultivated that terra firma for years and years without levees before Gen Williams went there with his system of reclimation?
A I am not aware that it was ever cultivated at all at the time I went there. The upper end of Union Island they might have cultivated a small portion of, or it might

have been Cultivated long before I went there. But at the time I was there, there was no Cultivation or sign of cultivation.

Q Had it not been used as a pasture for years and years?

A Oh Yes there were a few Cattle running on it at that time

Q Gen Naglee owns the Main land, the Spanish grant?

A I believe he owns the whole of what is Known as the Pescadero Rancho That extends over the main land on the other side of old River.

Q You had the same trouble in Grand Island did you not? there Gen Williams owned the Centre of the Island?

A I had nothing to do with the reclimation of Grand Island

9008

Q But that is the fact is it not

Mr Belcher This is not Cross examination. If you wish to make him your own witness we have no objection.

Mr Cadwalader What do you mean by Peat Islands? Islands from which Peat has been exported?

A Islands in which Peat is the Composition mainly of the Surface.

Q Peat is a fuel is it not?

A It is Combustible.

Q What.?

A It is inflamable, Combustible, It will burn the same as wood.

Q You do not pretend to say there is ever any danger of Staten Island, that 39000 acres, burning up do you?

A I mean to say that all
9009 the Peat Islands I Know

of have been burned out
from one to four or five
or six feet in the centre,
and the levees all been
burned down.
Q You think if it had
not been for the floods
in the San Joaquin that
Island would have been
burned up?
A I do not understand
your question.
Q I suppose you think
if it had not been for
the Spring and Winter
floods in the San Joaquin
would have been burned up?
A I suppose if the Island
became dry and caught fire
it would have burned down
to the water at any time
Q It must have been there
a good many years before
you went there was it not?
A I dare say it was.
Q It was in your Judgement
that these levees were Con-
9010 structed around the lower

end of that Island
A Not altogether on my Judgement.
Q Gen Naglee never wanted any levees Constructed on the upper part of it did he
A He Constructed a levee himself on both sides of the River
Q What was the difficulty then between you and Gen Naglee?
A I had no difficulty with Gen Naglee. If there was any difficulty it was between Gen Williams and Gen Naglee and what the nature of it was I do not Know.
Mr Belcher Mr Naglee wanted to hog the whole thing
The Witness My business there was as Engineer
Mr Cadwalader They had a law suit ~~there~~ did they not? A I heard they did
Q And Naglee got a perpetual injunction

against Williams

Mr Belcher. We object to that as irrelevant and immaterial

Mr Cadwalader. That is in reply to the suggestion of Mr Belcher that Mr Naglee is entitled to keep it.

The Court I do not see that it has anything to do with this case

Mr Cadwalader Q you went to work and put these levees around there did you? A The reclamation was not finished when I left there.

Q And has never been finished? How do you know then it was a failure? A I know the Island is full of water and has been full ever since last Winter

Q Your works of reclamation were, I suppose to prevent that? A That is what they were for

9012

Q They had not been completed when you ~~went~~ left there?

A No.

Q When did you leave there? A About a year after I went there. I think, in 1877. I was there about a year on the island

Q You have not been there since 1877?

A Not as an engineer.

Q. And when you left the works of reclamation had not been completed?

A No.

Q. Have you ever made any reports to Genl Williams about the feasibility of reclaiming that part of the island?

A No I have never made any written reports. I have reported to him verbally.

Q Did you not testify in the case brought by the grantee of General Naglee against General Williams in the Circuit Court of the United

9013

States? A I did not

Q You were not a witness in that case?

A No.

Q Did you make any affidavits? A I did not.

Q You were not a witness, neither did you furnish an affidavit in that case? A No.

Mr Belcher We object that this is not in cross examination and it has gone far enough

Mr Cadwalader Q Why do you call Staten Island a peat Island.

A Because peat is the composition of it; because the island is composed mainly of peat

Q Cannot you get over it with horses, carriages and wagons?

A Oh yes: It has all been under cultivation

9014 Q And it raises enormous

crops does it not in a dry season? A When it is reclaimed — you have to keep the water off and it raises fine crops of certain productions.

Q Raises 60 or 70 bushels of wheat to the acre? A I do not know anything about the wheat crop. When I say fine crops. It raises fine crops

Q Raises 300 or 400 bushels of potatoes to the acre?

A I do not know. I have heard farmers report raising from 5 to 7 tons of potatoes to the acre

Q How many bushels would that be? A I do not know.

Q Do you not know how many bushels of potatoes there are to a ton?

A no.

Q There are forty are there not?

9015

Mr Belcher. He says he does not know

Mr Cadwalader I want to find something he is acquainted with. There are 40 bushels to the ton and 7 tons to the acre would make 280 bushels?

A I said from 5 to 7 tons.

Q Have not Genl Williams, Roberts and Genl Naglee raised 50 bushels of wheat to the acre on Roberts' island year after year?

A I do not know anything about Roberts' Island. I have never been on that

Q Has not wheat to the extent of 50 or 60 bushels to the acre been raised on Union Island?

A I have heard there was that much raised

Q You have seen signs of it have you not?

A I have seen ~~whole~~ fine

9016 wheat there on the Kidd

ranch belonging to General Williams.

Q The finest that ever you saw anywhere?

A I could not say that. I am no judge of such things. I am no farmer. But I could see it was fine wheat but could not judge of the probable yield at all.

Q It is a very sure crop is it not? A That I could not say

Q And it is always splendid pasture land is it not?

A Which? the peat?

Q yes. A It makes very good pasture land if reclaimed and the water kept off it. A great deal of it is used for that

Q Even before reclamation it is fine pasture land?

A When reclaimed it is fine pasture land

Q And even when the

water is not kept off?

A No, I do not think it is.

Q Has not Genl Williams been in the habit of ranching stock there by the thousand, an thousand head for Miller & Lux?

A I believe there were some sheep in some of the season I was there.

Q But I am speaking of cattle by the thousand head? A I do not know that he had any cattle on there. He might have had some but not when I was there. I do not know of his having any cattle there.

Q You have not been there since 1877? A No, that was a very dry winter we had the island drained.

Q You were in Union Island were you?

A About a year.

Q What time did you go there? A I think

it was in October 1876

Q What time did you leave? A I cannot recollect whether September or October of the next year

Q You have not been there since? A Not as an engineer. I have been up there; I have been since on the island and around it.

Q You had never been there before? A I never was there before I went there in October of 1876

Q But you are satisfied that before you went there there had been very large crops of wheat raised and very heavy crops of potatoes on Union Island?

A No. I am not satisfied of that. I do not know that that was the case at all. I do not think that the lower end of

9019 Union Island has ever

been cultivated

Q Well the upper?

A A portion of the end had been leveed off known as the Kidd ranch. There was a very small levee around that, embracing some 4000 acres. I think that had been in cultivation for some years before

Q Do you know about the crops raised there?

A I understood there were very fine crops

Q About 10 times what they would raise on ordinary land? A I cannot say as to that. But I understood they raised fine crops, good crops, on the Kidd ranch. And I have seen fine grain standing there; it appeared to me to be fine

Q The finest you ever saw? A No I could not say that, that it

9020 was the finest I ever seen

Q Now take Staten Island. When did you go there?
A I went there in 1878
Q What time did you go there? A At the first day of June
Q What time did you leave?
A Last July
Q You were there a month were you? A Last July was 1881 was it not?
Q You went there at what time, June in what year? A 1878; immediately after the flood of 1878
Q After the high water of 1878? A yes.
Q And you left there this year? A yes.
Q Whom were you there for? A J.B. Stagg in
Q What were you doing there? A I was reclaiming or endeavoring to reclaim that island.
Q You made a report of the practicability of

9021

reclaiming it did you?

A I have made several reports since I have been there at several different times

Q They were all in favor of the island being reclaimed were they not?

A They were

Q What effect did the filling of the Mokelumne River, both branches have upon the reclaiming of that island? The river bed of each branch of the Mokelumne has been raised has it not?

A Not to my knowledge. It must have been very slightly if at all since I have been there.

Q The water is muddy is it not?

A It is muddy

Q Has not the bed of both branches been raised 2 or 3 feet?

A Not that I know of.

9022

I don't think it has; not during my time there when you went there in 1878? A I believe they had in grain and potatoes that Spring before they were flooded. Of course the flood destroyed everything

Q They plant after the floods do they not? A Yes. They planted some that year. There was very little grain in but some potatoes and some beans And I believe there was two acres of hay land, alfalfa and clover

Q Those lands have always been planted after the Spring floods have they not? A Well if the island has been covered with water they plant after the Spring floods. But where the water has been kept off they commence ploughing in the Fall and winter

9023

Q- You can plant after the Spring floods there, and raise large crops?
A- Yes, it can be done.
Q- Large crops of sweet potatoes onions, peas, and beans?
A- Yes. All of those. Q- Barley and sometimes wheat?
A- All those things have been raised there
Q- And then they can raise melons can they not?
A- I have seen them raised on a small scale there.
Q- I mean on a large scale?
A- I dare say they could.
Q- You have seen them raised down there have you not?
A- I have seen them in their gardens.
Q- Enough to run a sugar factory? A- I have seen them raised there in their gardens.
Q- I am not asking you about that now. I ask you if you have not seen them raised there in quantities
9024 sufficient to run a sugar

factory? A- No I have not.

Mr. Belcher Melons!

Mr. Cadwalader Yes, melons!

Mr. Belcher A sugar factory run on melons would be a new institution. I did not know they were used for that.

Mr. Cadwalader You can go down here and see it.

The Witness I do not think there has been over 3 acres of melons at any one time since I have been on Staten Island.

Mr. Belcher Do you mean watermelons or cantalopes, Mr. Cadwalader?

Mr. Cadwalader I mean melons.

Did you understand me as referring exclusively to watermelons?

A- That is what I understood. But I do not know of any kinds of melons being raised there more than two or three acres, during my time there

9025

Q- What was done there in '79? A- As to farming do you mean?
Q- Yes? A- Well they made preparations for a large, I believe. Very nearly all the Island was put into a crop of one kind or another — grain or potatoes.
Q- Was there any crop raised? A- A very large crop was raised of potatoes.
Q- What was done in '80? A- Preparations were made also for a large crop in that season, but the flood came and destroyed everything again
Q- Was there any planting done after the flood went down? A- There was very little done this last season. Perhaps altogether 900 acres.
Q- How much was the bed of the Mokelumne River raised in '80?
A- Not that I am aware of.
9026 Q- It remained stationary did

it? A- I can not say that it did. It might have been raised slightly but it must have been very slightly.
Q- Did you not do any pumping of sand there out of the bed of the river?
A- I did a little.
Q- Could you not tell by that? A- No. The sand that I pumped was long before the flood of '80. and I have pumped none since that. That was for the purpose of stopping up some cracks.
Q- Was there sand in the bottom of the river?
A- Generally you find sand in the mid-channel.
Q- How was it off the channels? A- Then it became less sand until you came into this sediment, as fine as silk and soft.
Q- Did you have any slickens? A- That is what I understand by slickens.

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Q- To what extent did you have slickens on Staten Island in '79 and '80?

A- Well there might have been a deposit of an inch and a half or two inches on the outside of the levee for a distance of say one hundred feet wide all around the island. But inside there was nothing.

Q- Regular slickens?

A- What I understand is slickens.

Q- Now take the beds of the rivers. What kind of deposits do you have in the beds of the rivers?

A- Generally sand. In mid-channel where the current is, you generally find sand—where the water is flowing.

Q- Is it your idea that the slickens stayed but the sand did not? A- What?

Q- Is it your idea that the slickens remained but the sand did not?

9028 A- I do not understand you.

Q- You say you had slickens there for 100 feet wide on the banks of the Island?
A- Yes.
Q- Now did you not have any sand in the bottom of the two rivers or the bottom of the two Forks?
A- I say in mid-channel. You find sand generally all through the river in mid-channel, where the strength of the current is greatest.
Q- Where you do not have any current you do not have any sand?
A- Where there is no current we find this slickens and no sand
Q- There ~~w~~ is more or less slickens or sand in those two Forks?
A- In the mid-channel we find the sand. On the banks, immediately on the banks, out of the current you do not find any sand or so
9029 little as to amount to nothing

There may be once in a while a small tract. But generally you find the slickens. That takes, not all the Island, but all that portion of the Island outside of the levee.

Q- It is all filled up with slickens? A- Filled up two inches since I have been there. It is very fine; runs off a shovel; it is thin.

Q- There is a good deal of hydraulic mining on the Mokelumne River is there not? A- That I do not know.

Q- And on the Cosumnes which empties into the Mokelumne.

A- That may be; I do not know anything about it.

Q- How far above Staten Island does the Cosumnes empty into the Mokelumne? A- I do not know.

Q. It is not more than 10 miles is it?

A That I do not know anything about. I never

9530

have been above in that direction farther than Woodbridge

Q. Now you have two rivers there, heavily sediment bearing rivers, and you admit there is lots of sediment down there

A I do not.

Q What? A. I merely admit that the deposition since I have been there amount to 1½ or 2 inches a year outside the levee. It may perhaps be greater in the slopes of the rivers. I have not examined those closely. There might be some filling up, I am not aware of but it could not be great, otherwise I would have noticed it. The tide rises and falls there every 24 hours

Q It is 24 miles ~~round~~ around that island is it not?

A It is 25½ miles around that island

Q. Where would the deposits be heaviest of the land

9031

and slickens coming down the river? A I can not say. It appears to be pretty evenly distributed all around. I think though the greatest deposit of slickens has been at the foot of the island, because we get more Sacramento River water there than we do above. Above at the head of the island we get nothing but Mokelumne River water. The Sacramento River is cut off.

Q How about the Cosumnes?

A It comes in direct communication with Georgiana Slough which comes down to the head of Staten Island, forming one side of Andrus Island, and empties very near the head of Staten Island into the Mokelumne, and every flood tide brings some of that water up.

Q It comes have to run
9032 up stream to get to Staten

Island after it gets to the Mokelumne?

A No, it does not run up stream, but in flood tide it runs up

Q. It would come into the Mokelumne 4 or 5 miles below Staten Island? A about half a mile below the foot of Staten Island

Q It would have to flow up stream? A It would have to flow up with the flood tide toward Staten Island. I think the greatest deposition has been at that portion of the island — the lower portion

Q. You raised a pretty decent crop the first year you went there; the next year it was a little poorer; the next it was a little poorer; and the last year it was the worse of all, was it not? A This last year there was 300 acres cultivated on the whole island

Q. That is not what I ask you. The best crop was raised the first year you went there?

A It was the crop of 1879; I should call it; 1879/80 - the crop that was put in the winter of 1878 and Spring of 1879

Q How did the crop of 1879 compare with the crop of 1878?

A I do not know anything about the crop of 1878 for I was not on the island. That was mostly destroyed I believe by the floods

Q You said there was quite a crop raised there in 1878?

A. That was raised after the flood receded

Q That is what I say?

A There was not much land put in, but what was put in the crop on was good.

Q You saw that did you not?

A I did

Q There are no floods down there after the 1st of June,

9034

are there? A. They have high water up to in the middle of July, generally; the 15th of July is about their highest water from the melting of the snow above

Q. Do they have any high water there after the first of June is what I asked you? A. The highest water that they had there was neither in June or July. The highest water that they had there was in February. But I say that they have high water until the 15th of July

Q. Can not you answer the question I ask you? Do they have any high water as a general thing after the 1st of June?

A Of the same year?

Q Yes? A. Not generally

Q You went there in 1878?

A Yes.

Q The crop was put in there after the water went

9035

down and you saw the crop that was raised there and it was a good big crop?

A I say the crop I think was an average, a fair crop of what was put in, for the amount of land that was put in cultivation. There was very little put in 1878

Q Everything yielded very heavily per acre?

A I believe every thing did very well

Q Well, exceedingly well?

Mr Belcher Objection has told you how it yielded

Mr Cadwalader Give us some idea the yield of the different things planted on Sherman Island after the floods went down in 1878

A I do not know anything about Sherman Island at all

Q I mean Staten Island?

A I can give to you, the same answer as I did before;

9036

that the farmer reported from 5 to 7 tons of potatoes to the acre; and I have heard they had fine crops of beans but how much I cannot tell you.

Q How many bushels of onions to the acre?

A I cannot tell you anything about it. I have not the remotest idea

Q How many bushels of wheat.

A I have no idea, I do not know that any wheat was raised there; I do not think there was any wheat at all

Q Take the crop of 1879. Was the crop less in 1879?

A Do you mean the bulk of the crop? a a

Q Yes. A That was the largest crop that was raised when I was on the island.

Q You were there all that year? A All the time

9037

Q. Now, give us some idea of the yield for that year?
A It was about the same that it was in 1878 per acre. About 5 to 7 tons of potatoes to the acre as near as I can estimate from the reports I got from the farmers. It was not my business to enquire into that at all and I did not make it a subject of inquiry.
Q Now, in regard to wheat?
A I do not know how much there was raised, nor whether there was any wheat raised in 1879. There was barley, that I know
Q How in regard to the crop for the next year? Was that equal to 1879?
A That did not amount to anything on account of the flood.
Q Now did they plant after the flood went down?
A Very little, I say about 200 acres were put

9038

in the last season.

Q How was it in '80?

A That was destroyed by the flood.

Q How was it in 1881?

A There were about 300 acres of it put in I think

Q. The crops kept getting worse and worse did they not from the time you went there, and there got to be less and less tillable land, is that so? A I do not understand the question.

Q I will ask you whether it is not true that after you went there the crops got worse each year?

A I do not know that they did, for the amount of ground cultivated. I do not know that they were any worse. The crops run very equally on the tules each year.

Q Then I will put it this way: Did not the area of land put in grow less and less each year

A. After 1879 — yes.

Q. Now during all that time this sedimentary matter was coming down the Mokelumne River? A. Yes.

Q And during all the time the channels of beds of these rivers kept raising?

Mr Belcher We object to that as not in cross-Examination

Mr Cadwalader Q how long had Staten Island been cultivated before you went there?

A I think 5 or 6 years they had attempted to cultivate portions of it, and attempted to reclaim it after that time

Q. Nearly the whole of it had been cultivated for five years before you went there?

A. I believe at one time it was nearly all in cultivation in wheat or barley or something of that kind — in grain.

Q. When did Haggin buy in?

A. I do not know sir.

Q. Now, this Jersey tract, what was its condition as to cultivation when you went there?

A. Well, I dare say there was one half of it in cultivation, perhaps two thirds of it.

Q. What was it used for?

A. It was used for farming and raising crops, principally grain.

Q. How much of the bed of the river, abreast of it, was filled up, when you were there?

A. I could not say. I found 66 feet of it was generally in front in the channel. I sounded it for two or three miles and I have never sounded it since.

Q. I have not asked you about the channel. I am asking you about the bed of the river, that did not constitute the channel. How much did that fill up?

A. Nothing at all, that I am aware of on the Jersey side. The peat washes out and caves off and breaks off into the river. It cracks. There is no such a thing as sediment there.

Q. You say the river is not filled up at all there?

A. Not to my knowledge.

Q. You think it is not filled?

A. On that side; it might have filled on the opposite side for all I know.

Q. Take both sides of the island?

A. It is not an island.

Q. It is a piece then of the country across the shore?

A. It is a piece of the main land on the east side of the

9042 San Joaquin river.

Q. What they call salt, marsh and tide land:
A. It is not salt and marsh. It is tide and overflowed land.
Q. Why did you not say that before:
Mr. Belcher. You did not ask him.
Mr. Cadwalader. Do anybody call those islands down there "peat islands" but you and Mr. Belcher?
A. I do not know. I think I have heard the term frequently.
Q. You said to Mr. Belcher that the building of levees had very little effect upon the raising of the water in the river:
A. So far, that is my opinion.
Q. The rivers run just about as freely as if the levees had been there?
A. Apparently.
Q. Did you say that the
9043 farmers preferred the sediment

on Grand Island?

A. I did not. I say that on Grand Island the sediment land is the very first quality of orchard and garden land. All of their orchards and gardens are on this strip of sediment.

Q. Did not you say that the farmers preferred sediment there?

A. I said that they were very choice of it. I was not speaking of Grand Island. I spoke of Staten Island.

Q. Is not it a fact, that all the orchards on Grand Island were started before 1870, before they had any overflow of sediment?

A. I am not aware that they have had any overflow of sediment on Grand Island.

Q. You are not aware that they were overflowed from sediment?

A. I am not aware of it; no sir.

9044 Q. Their orchards are all on the front of the island, are they

not? A yes.

Q. And these orchards were all there before General Williams attempted the reclamation of the center of the island?

A. I do not know how long ago it was that he attempted the reclamation of the center of the island.

Q. Evidently they had been there for eight or ten years?

A. Some of them.

Q. What do you mean by saying that the farmers prepared sediment? Is that land not rich enough on the margin of the river without sediment?

A. This is sediment land on the bank of the river. Immediately back of that is the peat land.

Q. That was before the oak trees grew. That island has a fringe of oak trees around it, has it not?

A. Not that I know of. There
9045 are some sycamore trees around

it, I think.

Q. And a great many oaks?

A. Not that I know of. There might be. I do not know. I have not noticed them.

Q. I want to understand you and not to criticize you. When you speak of the sediment, you mean on the lands over by the Sacramento river, do you not?

A. Yes.

Q. As contra distinguished from what you call the peat lands in the center of the island?

A. Yes.

Q. You do not mean to say that farmers having onions or sweet-potatoes or gardens want sediment run over them in order to make the land richer?

A. No sir, I do not mean to say that, sir.

Q. Then I understand you. You say there have been no deposits of sediment on

9046 the Union Island?

A. Not in my experience.
Q. Not in yours?
A. Not to amount to anything.
Q. ~~And~~ none ~~ant~~ on Staten Island?
A I measured the deposit of sediment during this last flood, after the water had receded.
Q. That is 1881?
A. Yes. The water stood from ten to twelve or fourteen feet along all over Staten Island And the closest point of Staten Island to the Sacramento River is a mile and an eighth.
Q. How much of a deposit of sediment did you find?
A. I found about 1/8 of an inch on the floors of the buildings that had been submerged for six weeks or two months.
Q. How much was the Sacramento River filled up abreast of Staten Island?
A. I am not familiar with the Sacramento River there.

Q. You are speaking about water that came from the Sacramento on to this island?
A. Yes.
Q. Did it go there?
A. It came in through breaks in the Sacramento River above Walnut Grove — between Walnut Grove and Sacramento City.
Q. How much is the Sacramento river filled up where this water came from?
A. That I do not know.
Q. Over ten feet.
A. I do not know anything about it. I do not know that it is filled up any.
Q. You have been up and down there?
A. I have in steam boats.
Q. And you know it is filled up ten feet, do you not.
A. I do not know that it is filled up at all of my own knowledge.
Q. I am not speaking of your own knowledge.
9048 The Court. I think I shall

have to restrict these cross-examinations. They seem to be prolonged and I think 2/3 of the time is spent in cross-examination that is absolutely pointless.

Mr. Cadwalader. We can not avoid it. These parties come here and produce gentleman who have been in these neighborhoods for four or five years and it is only by a rigid cross-examination that we can get at the story that should be told. We can not tell what these five counsel will have to say on the final argument.

The Court. It seems that a considerable time is spent to make the witnesses use the language of counsel and that always injures the evidence when it is accomplished.

Mr. Cadwalader. Q. I will ask you if you have ever been to this place, marked the

9049 "sugar mill" on this map

<the Joy map> the sugar mill?
A. This is Isleton?
Q. Yes: A. I have been there, yes.
Q. That was a mill that was established for the manufacture of sugar, was it not?
A. It was, I believe.
Q. Out of melons?
A. I think it was established for the manufacture of sugar from beets.
Q. And hundreds of acres were used there in the production of melons?
Mr. Belcher. I object to this question on the ground that it is not in cross-examination.
<The question is withdrawn.>
Mr. W. C. Belcher. What do you mean by slickens?
A. I mean the silt — that is another name for it. It is a very fine, thin matter, soapy, without any grit that the water carries in suspension. That is what I understand
9050 by the term, "slickens."

Mr. Cadwalader. What is the color of it? A. It appears to be a light yellowish color— cream, yellowish.

Q. Does it crack when it dries? A. Generally it does.

Q. It cracks down to the soil it is deposited on? A. If it is a thin stratum it will crack through.

Mr Belcher. As to the depth, say at the lower end of Staten Island of this body and the soft material under it— as to the depth before you get to the solid ground? A. At the lower end of Staten Island ~~the~~ I sounded 40 feet and found no bottom. That was the length of my sounding rod and I did not get any debris. About three miles above I found bottom at about 40 feet. I have sounded all the way around the island every one hundred feet.

9057 Q. How much of the upper end

of the island did you find
to have a solid foundation?
A. Terra firma?
Q. Yes. A. I think about
one hundred acres.
Mr Cadwalader. I object to
this. It is not in redirect-ex-
-amination.
Mr. Belcher. I will withdraw
the question.

9052

Testimony
-of-
James W. Marshall

Called and sworn for defendant.

By Mr. Byrne. Q. Mr. Marshall when did you come to California? A. In 1845 in June; about the middle of June.

Q. From what country did you come? Where did you come from at that time?

A. I left Oregon.

Q. From Oregon? A. Yes.

Q. Where have you resided since 1845? A. I have resided part of the time here and part of the time in the mountains and I was down with Fremont's Battalion with the Bear Flag party.

Q. In what State have you resided since that time?

A. In this State.

Q. Do you know when gold was discovered in California?

A. Yes.
Q. Who discovered it?
A. I did.
Q. When? A. On the 19th. of January 1848.
Q. Where? A. Coloma.
Q. In what county?
A. Eldorado.
Q. On what river?
A. The South Fork of the American.
Q. The American — the South Fork of the American? A. Yes.
Q. State to the Court how many people there were, to your knowledge in the mining counties of California between 1849 and 1856 say?
A. I could not say pointedly to any certainty except Eldorado County. There must have been about 30,000 or 35,000 in Eldorado County, but Eldorado County included a part of what we now call Amador and a part of Placer. Eldorado County sent a delegation to the Legislature, I believe of six Senators and ten Repre-

sentatives in the Lower House.
She was then the largest
populated County so considered
in the State.

Q Do you remember in what
year that was?

A. 1850 — I will say 1850, 1851 and
1852 — along there.

Q And you say that outside of
the County of Eldorado, you do
not know about the population
of the mining counties?

A Not particular.

Q But in that County how many
people did you say there were at
that time?

A. It was estimated by myself
and others to be from 30,000
to 35,000, including this portion
of Amador, you know, and Placer.

Q. Why did these people come
to California? What brought
these people here?

A. Mining.

Q. What was their object?

A. Most of them were mining.

Q. What kind of mining?

9055 A. Placer —

Q. (Inty.) I mean for what particular? A. Gold.
Q. For gold? A. Yes.
Q. When you came here in 1845 how many people were there in this valley of the Sacramento?
A. I think that 50 would include all except the Indians.
Mr. Hart. In Eldorado County is that? A. No sir, in the valley of the Sacramento from the San Joaquin on up this side and then on the other side to what we used to call Barker's Ranch or the Hula-che-muk - or as we sometimes called it Alecia.
Mr. Byrne Q. And you say that 50 people exclusive of the Indians would embrace all?
A. Yes, I think all.
Q. Of the population in this valley? A. Yes on both sides of the river.
Q. Were they all white people?
A. Some of them were Kanackas
9056 and some were from New Mexico

and some few of them were Canadian French, trappers and hunters.

Q. That was in 1845?

A. That was in 1845.

Q Did you ever know a man ~~by the~~ named Captain Armentaja?

A Yes.

Q. Who was he? A. He was a trapper when I ~~knew~~ knew him in Oregon City for the Hudson Bay Company. Before that he had been a Captain of their trapping bands. They sent out trappers, you know, and each one had its chief.

Q. Did you ever see him in California? A no sir.

Q. Do you know that he ever was in California?

A From his description, yes.

Mr. Hart. That is hearsay.

Mr Byrne. Q. Did he ever state to you that he had been in California?

A Yes.

Mr Hart. Object to this question upon the ground that

9007

it is hearsay evidence.
The Court. What is the object?
Mr Byrne. It is to lead up to another question which I will now ask: State to the Court what, if anything, Captain Armentaja told you about a flood which had occurred prior to the time when you came to California say in the year 1830 and which submerged this whole valley?
Mr Hart. I object to that question upon the ground that it is incompetent.
Mr Byrne. We submit that matters of public and general interest occurring more than 30 years all this time, can be proved by common and general reputation and by the statements of parties who were eye-witnesses to the facts.
Mr Hart. It maybe proved by general reputation, but not by the statement of Captain Armentaja
9058 Mr Byrne. We propose to show

that Captain Armentaja, who was the Captain of a band of trappers of the Hudson Bay Company and who was here in 1830, saw this whole valley under water from Cotton-Wood Creek in Shasta County clear down to the lower portion of the valley. That he so informed Mr. Marshall and that subsequently Mr. Marshall saw physical evidences of the true statement made by Captain Armentaja in this valley, and that it was the common and general reputation of the people who resided in this valley at the time, and subsequently to the time of Mr. Marshall, that there had been such a flood and that its extent was substantially what Mr. Armentaja stated it to be. We propose to prove this, as a matter of common and general reputation and as a matter of public interest, which of course affected everybody in the country at the time and which can

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not be proven only in this way and which the Code, in our opinion, warrants us in proving in this manner.

The Court. I do not recollect of any provision of the Code that warrants any such proof.

Mr Byrne. I have the provision here. It is the 11th. subdivision of Section 1870. <Reads.>

Mr Hart. You do not mean to say that what Captain Aumentaja said was by common reputation:

Mr. Byrne. I say that this is one fact, tending to support the common and general reputation which we propose to prove by this witness.

Mr Hart. I will add to my objection that the testimony, if admitted would be irrelevant and what one man may have said, does not tend to prove reputation. It does not tend in any degree to establish reputation, what anyone man might have said.

The Court. I do not see anything to justify this question. I will have to sustain the objection.

9060 Ex. Mr Byrne. We except to the ruling of the Court.

Mr Belcher Then the statement which Mr Byrne made as to what he expected to prove by the witness will be taken as an offer

Mr Hart I objected to the question, let him ask his question

Mr Byrne I have stated what we expect to prove in this case

Mr Hart But I objected only to the question

Mr Byrne - Mr Marshall at the time you came here or at any subsequent time was there any common or general report as to the occurrence of a large flood in the Sacramento Valley in the year 1830 or about that time?

A There was

Mr Hart I think this is irrelevant and I shall object to it on that ground It is opening up another subject of inquiry here

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which it seems to me cannot have any interest in the case at all

Mr Byrne The principal burden of the evidence of the plaintiffs in this case has been to show that the hydraulic mining operations of the defendant and others in this State has caused these floods which have submerged the Valley in the past and which in the future will inundate the cities and do all these remarkable things which the complaint sets forth. We propose to show by this witness that before any hydraulic mining was ever heard of or thought of or any other kind of mining in this State that large floods did occur in this Valley. We propose in this connection to lay the foundation for an argument that even if everything that

9062

has been stated in relation to the filling up of the River Channels be true that this is a mere bagatelle so far as the cause of these innundations is concerned. That the Sacramento River and these other Rivers that have been referred to in the testimony in this Case were not ever capable of carrying the amount of water which comes down at periods of high floods. That this whole Valley has been under water time and time again At any rate we have shown that it has been two or three times and I propose to show by this witness that as far back as 1830 according to the common reputation and tradition which existed when he came here and which was well known to

9063 every body and it was

a matter of common report that this entire valley had been submerged and under water for weeks and months at a time and that in fact admitting every thing to be true that they state for the sake of argument as to the filling up of the Rivers and the raising of the low water marks that it constitutes but a infinitesamal part of the cause which creates these floods and inundations. That this River never was capable of carrying the amount of water which naturally comes down during these extremely rainy winters and it probably never will be. That however will be an inference for the Court to draw. We think this proof is competent. They charge us with doing this damage. They are not willing to admit

that any flood has occured which was not attributable to hydraulic mining.

Mr Hart We do not claim anything of the kind

Mr Byrne. We do claim that we have not caused this alleged injury and we are here on our defense to show that we have not caused it

The Court I understand that the plaintiff claims that because of the filling up of the River the floods get higher and higher by each occurrence of high water

Mr Byrne We propose to show by this and other witnesses that that as a matter of fact is not true - that before there was any mining at all higher floods occurred then than ever have occurred since and it would sub-

9065 stantially prove that we

are not the cause of those floods complained of.

Mr Hart What we say is that you are reducing the carrying capacity of the River and that a flood like you speak of now would drown out the State Capitol if it should ever occur again

Mr Cadwalader The tendency of this is to broaden the area of the examination

The Court That always occurs when we admit evidence of any kind

Mr Cadwalader I have heard these old trappers speak of volcanoes that were here in 1840 at the head of this valley and I am satisfied that it is true but we certainly cannot go back to investigate all these phenomena. it might be that this volcano in operation in 1840

9066 filled this valley up about

Cottonwood where Mr Byrne speaks of. Mr Byrne starts at Cottonwood which is about 200 miles from here.

Mr Byrne At the head of the valley as I understand

Mr Cadwalader I do not see why he does not go back to the original flood

The Court I was about to say when interrupted that I understand the theory of the plaintiffs case is that in consequence of the mining debris being put into the streams the floods as they occur get higher and higher and the water is liable to do more damage. that that has been the effect of mining so far and therefore will be the effect if mining operations are allowed to be continued and the Rivers to be filled with debris And that in the future it

9067

will get worse and worse. It seems to me that the best evidence on that subject is what the floods have been and whether they are getting worse. It may be very true that the effect of evidence that there was a very high flood in 1830 may be very little. The amount of water which my be supposed to have fallen at that time may be such as to throw no particular light or afford no particular aid in solving this problem. Conditions may then have existed which would aid us very little. It is objected that this evidence is not rellavant. the objection as to its competancy is not made. The Idea of General Hart seems to be that the Statute referred to would make the evidence Competant provided it went to general repotation. I will allow this question

9088

(The Reporter read the question.)

Mr. Byrne What was that general and common report in reference to that flood? A- It was from the inhabitants and the Indians and the indication of the debris, the float, the drift.

The Court He is asking you about repute.

A- Yes. At from trappers that were here before me and General Vallejo has reported - spoke about this Valley overflowed, and of his seeing this Valley overflowed himself.

Q- Those are the sources some of the sources from which you derived that information Mr. Marshall, I believe presume! A- It was and from my observation.

Q- Now will you state what the common report was as to the extent of that flood - how far it extended over this Valley? A- It was reported to have covered very near the whole Valley except

the Buttes. There were indications down here where Sutterville is of the Water being five feet higher than it has been since I have been in the country some four or five feet higher
Q- State what indications you saw after you came here which confirmed this report of the big flood?
A- The lodging of drift upon the shrubbery and trees. This was covered with brush and the drift lodged in them and some of it lodged in the sycamore trees which stood along on the banks of what was called Sycamore Slough right in back here (pointing) and down at Sutterville on the high bank there was a lot of tule rolled up and the sand blowed onto it and it held it there. I took my cane and so did L. W. Hastings and dug up the sandbanks and found

9070

the tule there rolled up as if the water had rolled it up

Q- When was that?

Q- That was in 1849?

A- The winter of 1849-50. It was the last of the year.

Q- How high above the surface of the land were these evidences of previous floods of which you speak — say drift wood in the trees and these other things.

A- It was about on an average with the drift in the trees.

The Court You mean about on the same level?

A- Yes.

Mr. Hart What was on the same level?

A- This tule.

Mr. Byrne You did not understand my question. You say you saw drift wood and other evidences of high water in the trees, in the sycamore trees?

9071 A- Yes some in the syc-

among trees and some in the brush
Q- How high were these evidences of the flood above the level of the plain?
A- That is a hard question to answer because I did not see any of these bottoms that were precisely level
Q- How far above the foot of the tree or the land at the foot of the tree?
A- Different heights. Different trees grew on land of different heights.
Q- State one or two instances?
A- It did not come up to cover what we call the adobe land opposite Sutterville. I think it went up about half way up on that bank
Q- It was halfway up on the Sutterville bank?
A- Yes. The adobe land - what we used to call the adobe land - a kind of clay
9072 land not the bottom land

Mr. Byrn I understood you to say you found in the trees evidences of high water in the nature of driftwood?
A- Yes.
Q- Am I right in that?
A- Yes you are right.
Q- How high above the foot of a particular tree or those particular trees where you saw it was this driftwood
A- I saw it on many but on one right here I should think it was near the mouth-near the entrance of R, a kind of a sycamore that stood on the bank and there was some sand up a ways. It was very near up as high as I could reach.
Q- How many feet would that be? A- It would be about six or six and one half feet.
Q- Have you seen or have you witnessed any floods in this valley since you came here? A- Yes.

Q- State when?
A- I witnessed one in 1846.
1845-6. The winter of 1845-'6.
Q- Will you describe that to the Court?
A- I passed over this valley and down where this town [Sacramento] is in a canoe and we went down to rescue an old ferryman and an Indian— the old ferryman and an indian and his wife and children. He had lost his canoe and we fixed up a canoe at the Fork and we got some poles some poles twelve feet long and came down through the way that Sutter had cut for his carts to go through the brush. When we came to the hut— the hut was built with willow-poles stuck into the ground—bent over and tied and tules were put on top. They were on top of the house and the woman was the first to see us and

she began to cry out "Americanos, Americanos" and she appeared to be wonderfully rejoiced.

Q- Where was that Mr. Marshall- where was that hut?

A- It was somewhere down here on the bank of the river on a kind of a high spot a knoll. There was about two feet of water, that is where the hut stood.

Q- Was that within the limits - the present limits of Sacramento.

A- Yes. It may have been K and may have been J. It was near there, somewhere in that neighborhood.

Recess until 2 o'clock.